

OCT 27 1928

MOTOR AGE

A Chilton Class Journal Publication
Published Weekly October 25, 1928

Beautiful Streamline Body

Rich Upholstery

127-inch Wheelbase

Sweet Running Power Plant

Balloon Tires

Shock Absorbers

Four Wheel Brakes

Front and Back Bumpers

Spotlight

Wind Shield Wiper

and Timken Bearings for Life

People are *given* accessories on cars today that they used to have to *buy*. Why?—because there are so many good cars on the market that any one of a number of added advantages may result in making a sale.

Name *all* the advantages. Do not let Timken Bearings be out of mind because they are out of sight. It may be just that extra ounce of persuasion that will help to make a sale.

Tell prospects Timken Bearings are used. It means more and more to the public every day.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

Motor cars are "Timken-equipped for life" because Timken electric steel, Timken tapered construction and Timken *POSITIVELY ALIGNED ROLLS* preserve the life of the bearings far beyond the life of the average car.

TIMKEN *Tapered Roller* BEARINGS

For 8th . . .

Consecutive Month

Shipments of Century Hupmobiles

Eclipse All Previous Records

With a total of 6,536 cars shipped in the month of September, the demand for the new 1929 Century Hupmobiles continues at the same swift pace established earlier in the year . . . ¶ September was the eighth consecutive month in which Hupmobile shipments exceeded any corresponding period in the company's his-

tory. The number was 65 per cent greater than any previous September and 166 per cent greater than September 1927 . . . ¶ Public response to the greatest motor car values of the Century is attested by the fact that shipments for the first nine months of this year were actually 38 per cent more than shipments for the entire year of 1927.

Newly refined in every detail, the new 1929 Century Hupmobiles are accelerating the previous record sales of these popular cars. Dealers interested in this profitable selling opportunity are advised to act promptly. Wire or write today for information on the Hupmobile contract.

HUPP MOTOR CAR CORPORATION
Detroit, Michigan

NEW 1929 HUPMOBILE
CENTURY
SIX AND EIGHT

MOTOR AGE

Vol. LIV

Reg. U. S. Pat. Off.
Established 1899

No. 17

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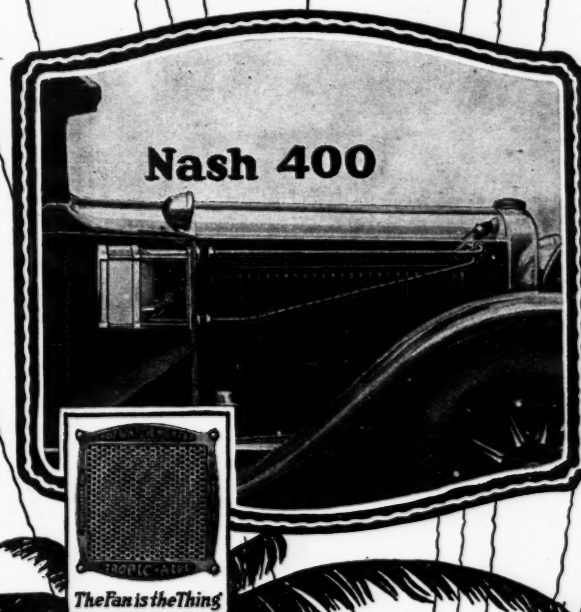
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TROPIC-AIRE HOT WATER Automobile Heater



"for those who don't go south"

**For Passenger Cars
Motor Buses
Taxicabs**

AT the first cold snap, a steady stream of motorists, already sold on Tropic-Aire, will be ready to buy! Our nation-wide selling program will soon reap a harvest for dealers who demonstrate Tropic-Aire. Get a sample and start now! Write us for the name of the distributor in your territory.

TROPIC-AIRE INC.

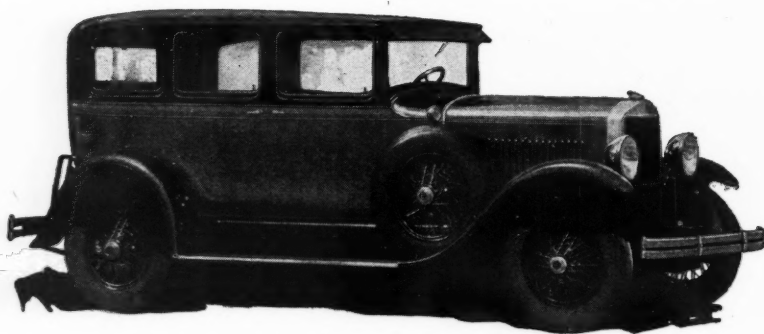
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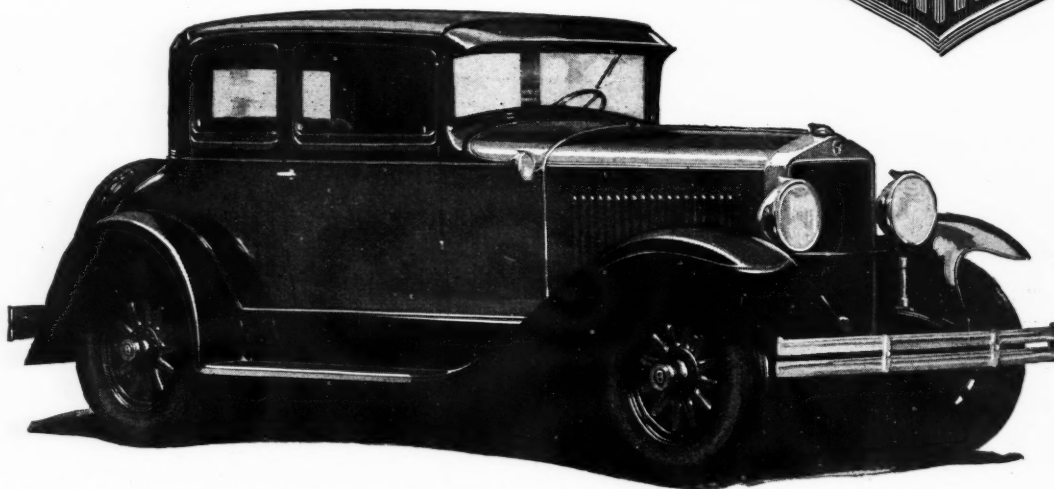
sure

for

Passenger Cars Motor Buses and Taxi Cabs



MODEL 610. Illustrated is the five-passenger Sedan at \$875 (wire wheels and side mountings extra). There is also a two-passenger Coupe at \$860.



MODEL 619. Illustrated is the four-passenger Coupe at \$1575. On this chassis there are also a five-passenger Sedan at \$1595, and a Sport Phaeton at \$1595.

Custom-built bodies by LeBaron are also available. Special equipment, at extra cost, may be had on several of the standard models. All prices listed are f. o. b. Detroit.



MODEL 614. Illustrated is the five-passenger Sedan at \$1295 (wire wheels and side mountings extra). On the same chassis we provide a four-passenger Coupe at \$1275, and a Sport Phaeton at \$1295.

GRAHAM-PAIGE

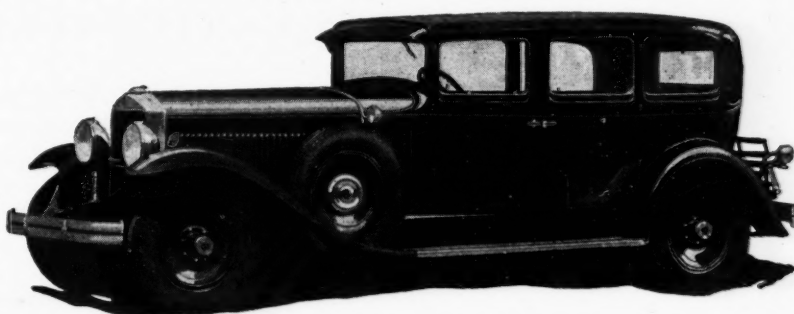
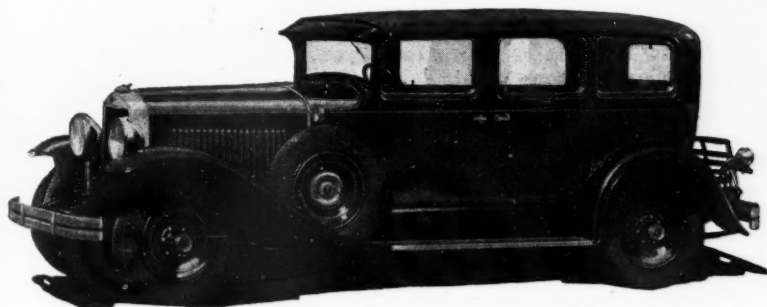
A Complete Line of Motor Cars

Graham-Paige retail sales in six months of this year exceeded those for any twelve months in the 19 years of this company's history. In establishing these new all-time records, Graham-Paige dealers had the advantage of a complete line of motor cars—each a substantial value—ranging in price from \$860 to \$2485, f. o. b. Detroit. There is territory open for dealers who possess the fundamental three "C's"—Character, Capability and Capital.

Address:
GRAHAM-PAIGE MOTORS CORPORATION
Detroit, Michigan

Joseph D. Graham
Robert C. Graham
Ray A. Graham

MODEL 629. Illustrated below is the five-passenger Sedan at \$1985. Available also are a seven-passenger Sedan at \$2110; a Town Sedan at \$2085; a Coupe at \$2185; a Cabriolet at \$2185; a five-passenger Coupe at \$2085; a Limousine at \$2260, and a seven-passenger Phaeton at \$2110.



MODEL 835. Illustrated above is the five-passenger Sedan at \$2285. There are also a seven-passenger Sedan at \$2410; a Town Sedan at \$2385; a Coupe at \$2485; a Cabriolet at \$2485; five-passenger Coupe at \$2385; a Limousine at \$2560, and a seven-passenger Phaeton at \$2410.

GRAHAM-PAIGE

What Does Direct Mail Addressing Cost You ?

Can you get accurate production figures which will cover:

1. Cost of Addressing to Dead Names?
2. Cost of Addressing to Improperly Classified Names?
3. Cost of Making Selections from Your List?
4. Cost of Errors Made by Inexperienced Help?
5. Cost of Keeping Your List Up to Date?
6. Cost of Omitting Good Names Which Are Not on Your List?

The Chilton Automotive List of 135,000 Names Is Corrected Daily

Over 20,000 Names are dropped each year.

Over 25,000 Names are added each year.

Over 50,000 Names and addresses are changed each year.

A force of more than 100 people are kept busy every day to accomplish this, with the result that the Chilton List—with over 95,000 changes each year—is the outstanding leader in its field.

Mechanical equipment makes selections to suit your needs, and complete printing, multigraphing, binding and creative art and copy service are available, in addition to merchandising counsel of our representative in your territory.

You will find a distinct saving in addressing from the Chilton List. Write us for complete details as applied to your particular requirements.

CHILTON CLASS JOURNAL COMPANY

Direct Mail Division

Chestnut and 56th Streets

Philadelphia, Pa.

A STATEMENT CONCERNING THE "GRAF ZEPPELIN"

The Robert Bosch Magneto Co., Inc., takes pride in announcing that the "Graf Zeppelin", on its first trans-atlantic flight from Europe to America, was equipped with ten Robert Bosch Super-Energy Magnetos and one hundred and twenty Robert Bosch Pyro-Action Spark Plugs.

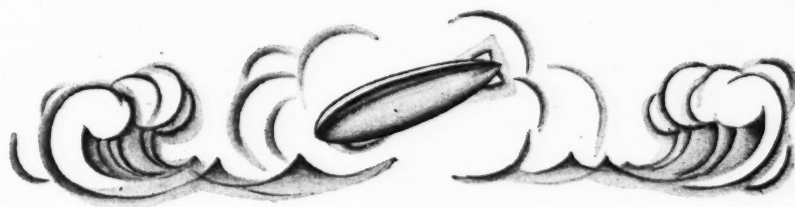
ROBERT BOSCH MAGNETO CO., INC.
3601 Queens Blvd., Long Island City, New York

The Original
Bosch
ROBERT BOSCH PRODUCTS

TRADE
MARK



ROBERT
BOSCH A. G.



New Departure Ball Bearings



A Nation-Wide Hook-Up

Here is a network that broadcasts, not sound, but real bearings service for the automobile and industrial trade.

United Motors Service authorized distributors of New Departure Ball Bearings, 800 strong, strategically located in every corner and center of the old U. S. A.!

Stocked, equipped and trained to give careful, courteous and *prompt* service in every emergency.

Now, before you need another bearing, get acquainted with your nearest United Motors Service distributor. Write for his name and New Departure's two helpful books for the service station.

THE NEW DEPARTURE MFG. COMPANY, BRISTOL, CONNECTICUT

MOTOR AGE

VOLUME LIV

Philadelphia, October 25, 1928

NUMBER 17

Big Space Demand at National Shows

45 Equipt. and 63 Parts and
Accessory Mfgs. to
Show

ALLOT MORE ROOM

NEW YORK, Oct. 19—Demand for space in the shop equipment and parts and accessory portions of the national automobile shows has been so great that the Motor and Accessory Manufacturers Association, which handles this section of the shows, has found it necessary to enlarge the space allotted to these sections in New York show and to provide for overflows in the Chicago show where space is more limited.

In this year's show there will be 45 shop equipment manufacturers participating and 63 manufacturers of parts and accessories, which will include manufacturers of motors, automobile bodies and other original equipment, as well as service parts and accessories.

As the success of closing the shop equipment section of the show to the public until five o'clock was so clearly demonstrated at last year's shows, the same policy will be followed this year, according to announcement made by the Motor and Accessory Manufacturers Association.

Notable in this section will be the large number of companies exhibiting paint spraying and finishing equipment and car washing apparatus. Besides these there will also be shown and demonstrated complete lines of heavy service equipment, air compressors, electric tools, electric testing and repair apparatus, motor reconditioning machinery, brake service apparatus and wrenches and other speed tools.

Exhibits in the parts and accessory sections will include passenger car bodies, passenger car, truck and bus engines, axles, transmissions, steering gears, lubricating systems, motor and chassis parts, shock absorbers, power brakes, illuminating apparatus, radiator shutters and many other original equipment and accessory items. There will also be exhibits of service parts, with a particularly interesting group in this classification at the New York show.

Oilgear Company Builds

MILWAUKEE, Oct. 19—Oilgear Co., Milwaukee, is doubling its capacity. Work is under way on a shop addition which will also house the office.

Dirt Flies as Ford- Packard Litigation Evidence Is Sought

A steam shovel is excavating at Billings & Spencer Company's plant, at Hartford, Conn. In the old days this plant was occupied by the Electric Vehicle Co., and prior to that by the Pope interests. The steam shovel activity is directed at bringing to light an old axle and wheel which are desired for use in the Packard-Ford litigation. More than 500 tons of earth have already been turned over with no results.

For the past two weeks newspaper files of early days have been systematically scanned and several articles in an old scrap book have been photographed.

Ewell City Sales Manager

BUFFALO, N. Y., Oct. 19—T. L. Ewell has been appointed city sales manager of the Chevrolet Motor Co. in this district. Mr. Ewell was formerly with Chrysler distributors in Cleveland and before that with Studebaker at Detroit and South Bend.

F. J. Fisher R.R. Director

NEW YORK, Oct. 19—Fred J. Fisher, vice-president of the Fisher Body Co., has been authorized by the Interstate Commerce Commission to sit as a director on the board of the Cleveland, Cincinnati, Chicago & St. Louis and Michigan Central Railroads.

Hupp Profits for Quarter

NEW YORK, Oct. 18—Hupp Motor Car Corp. reports net profit for the quarter ended September 30 of \$2,408,330 after all charges. This is equivalent to \$2.28 a share on capital stock and compares with \$440,079, or 44 cents a share, for the corresponding quarter of 1927. Net income for the first nine months was \$6,694,551, or \$6.63 a share, as compared with \$1,587,902, or \$1.58 a share for the 1927 period.

Autocar Appoints Dealers

The Autocar Co., truck manufacturers of Ardmore, Pa., announce the appointment of two new dealers: Mori Brothers Motor Company of Millville, N. J., have been assigned the territory of Cumberland County, New Jersey. Raymond W. Weight of Bristol Pa., has a portion of Bucks County.

A.E.A. Show Has Ideal Shop Layout

Service Department Feature
of Tenth Exhibit; All
Space Sold

CAR MEN INVITED

CHICAGO, Oct. 22—Replete with new and additional features, the Tenth International Exhibit of Automotive Products opened today at the Coliseum, under the auspices of the Automotive Equipment Association. Although the doors of the great exhibition hall have only been opened a half day at the time this is written, there is every indication that this will be the most interesting show ever held by the association. Attendance far surpassing any other previous show is already assured.

Spaces for exhibits all have been sold and more than 204 firms are represented. The heavy demand for space, considered a certain indication of the healthy business outlook in the industry, necessitates the use of the entire lower floor, the south wing, and the north hall of the Coliseum for display purposes alone.

Among the novel displays which characterize this year's show as outstanding is included a model layout for jobbers' mechanical service department. This exhibit is in actual operation and shows not only ideal arrangements of machinery, stock, display, etc., but provides a view of the latest types of equipment for such a department. This exhibit is expected to attract a great deal of attention.

The "set-up" has been based on actual experiences of several A.E.A. members who have been unusually successful in the conduct of a service parts business.

It is declared by officials of the association that the rapid recognition of the importance of the service parts market has forced a demand in the membership for such a display. In the exhibit are parts storage systems, turn-over control systems and methods for efficiently handling telephone orders for parts as well as the mechanical features.

(Continued on page 16)

Anthony Adds Studebaker

BOSTON, Oct. 19—The Frank P. Anthony Co. which distributed the Gardner in Metropolitan Boston for some years, and relinquished it a few weeks ago, has signed a contract to handle Studebaker cars.

Chrysler to Build Skyscraper in N.Y.

68-Story Building Will Top Woolworth Building.

NEW YORK, Oct. 20—Walter P. Chrysler has acquired a 60-year lease on property on the east side of Lexington Avenue between 42nd and 43rd streets and plans to erect a 68-story skyscraper on this site. The proposed building will be 808 feet high, or 16 feet higher than the Woolworth building.

This project is a personal one on the part of Mr. Chrysler and in no way involves his motor interests. He has organized the W. P. Chrysler Building Corp. for the purpose of directing this building.

First De Soto Owner Pleased

DETROIT, Oct. 21—The first Chrysler-built De Soto Six to be sold at retail in the United States was purchased by W. H. Stewart of Jacksonville, Fla. He made special arrangements with C. W. Matheson, De Soto vice-president in charge of sales, weeks before the car's announcement and sent his son to Detroit to take delivery on his purchase.

Mr. Matheson recently received a personal letter from Mr. Stewart which said in part: "Every time I stopped on my trip I had an interested and eager audience. I was called upon to explain the merits and virtues of the car repeatedly. The car was greatly admired by everyone."

Sales Head



Fred D. Soper

Mr. Soper has been made manager of the Northern sales division of the Gardner Motor Co., Inc. You read of his appointment in last week's issue of this business paper. He is one of the best known sales executives in the industry, and has an enviable reputation for success in the merchandising of automobiles.

Colyear Motor Moves

SEATTLE, WASH., Oct. 18—The Colyear Motor Sales Co. have opened in new and more commodious quarters. According to Dean C. Thaanum, manager, the new quarters in the White Building will contain 21,000 square feet, which will house a \$150,000 stock.

High Production Rate Continues

Greatly Increased Foreign Business Expected in 1929

NEW YORK, Oct. 20—Sustained active demand for cars and trucks is continuing factory operations at a rate far in excess of the usual four-quarter level and only slightly lower than in the record-breaking third-quarter just closed. Although there are a few signs of slackening, prospects are that the closing months of the year will also continue a high seasonal activity.

There are as yet no signs of any extensive stocking of new cars by dealers and several factories are weeks behind in meeting dealer demand. Ford Motor Co. and at least one other large producer in the low priced field have large back orders from dealers, while several producers of medium and high-priced lines have orders which will require close to capacity operation through the year.

Announcements by two important manufacturers of plans for European sales in 1929 give indication of the greatly increased demand for American cars which is expected in the coming year. An outstanding increase is indicated in Germany. In the development of increased foreign business manufacturers will be aided by much more extensive arrangements for financing sales. Several finance companies have already established offices.

The Automotive Calendar

SHOWS

Automotive Equipment Association, Coliseum, Chicago, Oct. 22-27.
Baltimore, 5th Regiment Armory, Jan. 19-26.
Boston, Mechanics Bldg., March 2-9.
*Buffalo, N. Y., 174th Regiment Armory, Jan. 12-19.
*Chicago, National, Coliseum, Jan. 26-Feb. 2.
Cincinnati, Music Hall, Jan. 13-19.
Cleveland, Public Auditorium, Jan. 26-Feb. 2.
Denver, Colo., Auditorium, Feb. 11-16.
Des Moines, Iowa, Coliseum, Feb. 18-23.
Detroit, Convention Hall, Jan. 19-26.
Detroit, Convention — National Automotive Parts Association, Oct. 29-Nov. 3.
*Hartford, Conn., State Armory, Feb. 16-23.
Kansas City, Mo., American Royal Bldg., Feb. 9-16.
Los Angeles, Washington Park, March 2-10.
Louisville, Ky., Armory, Jan. 21-26.
Milwaukee, Wis., Auditorium, Jan. 12-19.

Nashville, Tenn., Hippodrome, January.
National Standard Parts Association, Cleveland Auditorium, Oct. 29-Nov. 3.
Newark, N. J., Jan. 12-19.
*New York, National, Grand Central Palace, Jan. 5-12.
Peoria, Ill., Feb. 5-9.
Philadelphia, Commercial Museum, Jan. 12-19.
Quebec, Can., Drill Hall, Mar. 16-23.
Saginaw, Mich., Auditorium, Feb. 27-Mar. 2.
Salon, Automobile Salon, Inc., Hotel Drake, Chicago, Jan. 26-Feb. 2.
Salon, Los Angeles Motor Car Dealers Assn., Biltmore Hotel, Oct. 17-20.
Salon, Automobile Salon, Inc., Hotel Biltmore, Los Angeles, Feb. 9-16.
Salon, Automobile Salon, Inc., Hotel Commodore, New York, Dec. 2-8.
Salon, Automobile Salon, Inc., Palace Hotel, San Francisco, Feb. 23-March 2.
San Francisco, Civic Auditorium, Jan. 26-Feb. 4.
Seattle, Feb. 2-10.
Springfield, Mass., Municipal Auditorium, Feb. 25-March 2.

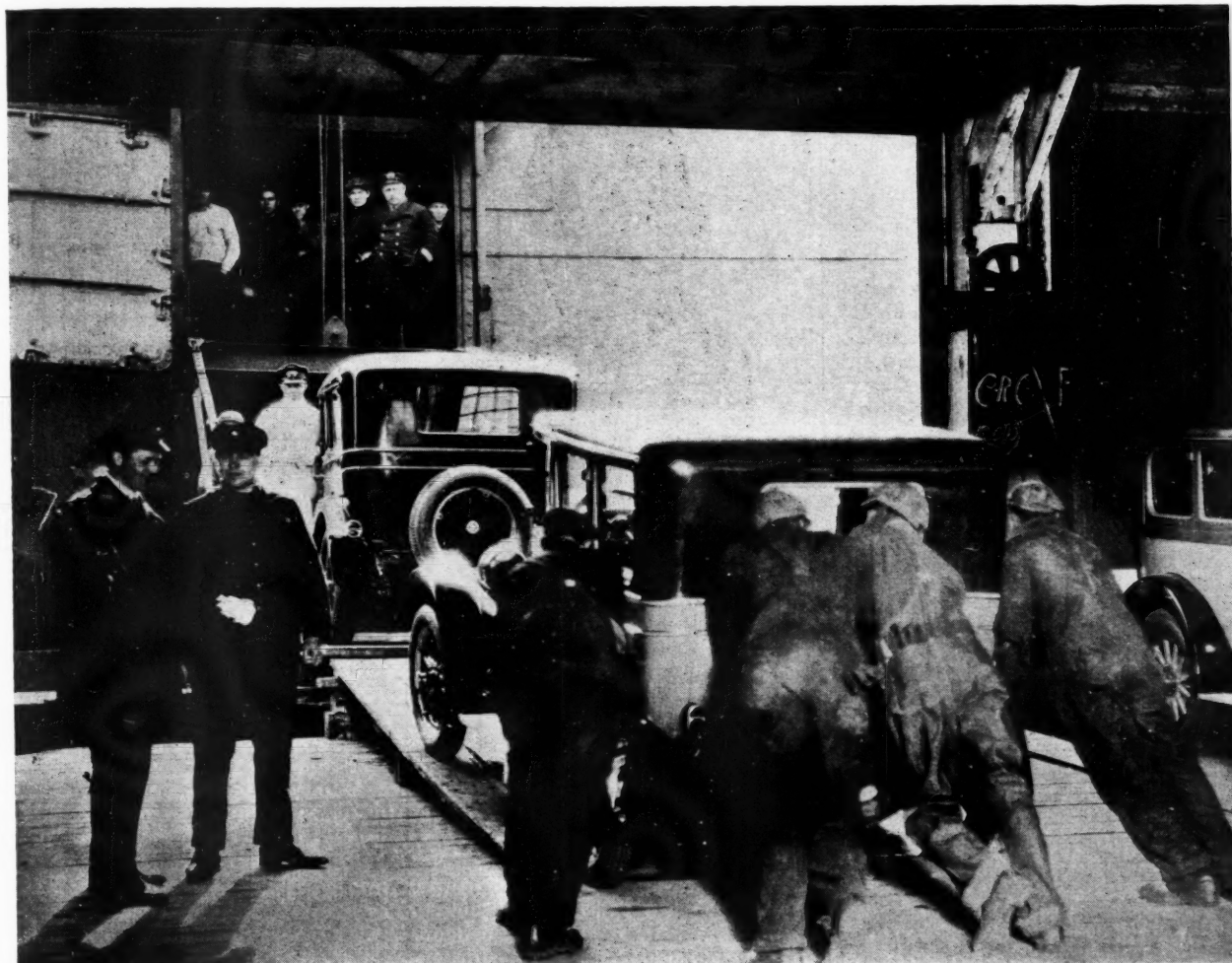
St. Louis, City Market Bldg., Feb. 4-9.
Syracuse, Feb. 4-9.
Ottawa, Canada, Feb. 4-9.
Pennsylvania Automotive Association, Allentown, Pa., Oct. 15-16.
*Washington, D. C., Washington Auditorium, Jan. 26-Feb. 2.
Providence, R. I., Cranston St. Armory, Feb. 13-16.

CONVENTIONS

Automotive Equipment Association, Coliseum, Chicago, Oct. 22-27.
National Automobile Dealers Association, Palmer House, Chicago, Ill., Jan. 28-29.
National Standard Parts Association, Hollenden Hotel, Cleveland, Oct. 29-Nov. 3.
National Tire Dealers Association, Boston, Mass., Nov. 19-22.
S.A.E.
Detroit, Book-Cadillac, Annual Meeting, Jan. 15-18.
Newark, Robert Treat Hotel, Transportation Meeting, Oct. 17-19.
New York, Annual Dinner, Hotel Waldorf-Astoria, Jan. 10.

*Will have special shop equipment exhibit.

Nov. 17—Production and Factory Equipment Issue—Automotive Industries.



Ship Cars Assembled

Willys-Knight and Whippets, completely assembled, being loaded aboard ocean-going steamer with Scandinavian ports as their destination. Ships are now specially equipped to handle cars fully assembled rather than the old method of boxing them. Arriving at the foreign ports it is now possible to drive the cars directly to the dealers' showrooms, avoiding the long delay of assembling

Fleet Operators Meet

NEW YORK, Oct. 19—About 270 members of the Automotive Service Association of New York met last week for the monthly meeting at the Park Central Hotel. This meeting was largely a fleet operators' meeting, the topic for discussion being Centralized Maintenance.

This topic was discussed at some length, with the aid of lantern slides, by H. V. Middleworth, superintendent of operations, Transport Department of the Consolidated Gas Co.

Morris R. Machol of the Fleet Operators' List Co. also contributed a few remarks to the discussion.

Radcliffes Sail for Europe

NEW YORK, Oct. 20—Charles Radcliffe, European field representative for Gardner Motor Co., sailed today for Europe. He was accompanied by Mrs. Radcliffe.

Paul Panhard in U. S.

NEW YORK, Oct. 17—Paul Panhard, manufacturer of the Panhard-Levassor automobile, arrived last night on the

S.S. Ile de France for a visit to this country. He is accompanied by H. Dran and P. Paquelin, two of the executives of his company, and Louis Cuny and August du Treux, two engineers of the company.

DePaola Joins Reo

DETROIT, Oct. 17—Peter DePaola, nationally known automobile race driver and winner of the title of national racing champion of the American Automobile Association, has taken a position with the Reo Motor Car Co. at Lansing.

DePaola will enter the sales promotion department under Clarence E. Eldridge, sales manager. He will travel throughout the country visiting branches of the company.

Durant Offers Truck Cab

NEW YORK, Oct. 19—Durant Motor Co. is now preparing to furnish a factory-built cab for its Rugby model four-cylinder 1-ton truck chassis. The price list for this cab, when mounted, is \$175, making the f.o.b. price for the chassis with cab \$885.

Archenhold Supply Expands

FORT WORTH, Oct. 20—The Archenhold Automotive Supply Co. of this city has doubled its space to carry a larger stock demanded by increasing trade in west and northwest Texas. The jobbing house was established here a year ago. The parent house is located in Waco. The company recently established a branch house at Wichita Falls. Roy Nussbaum, manager of the Fort Worth branch, says the stock carried here averages around \$100,000. The company is traveling 40 men.

Floyd D. Miller Dies

DETROIT, Oct. 19—Floyd D. Miller, office manager of the Nash Motors Co. at Kenosha, Wis., and formerly paymaster of the Buick Motor Co. at Flint, died suddenly Sunday at his home in Kenosha.

After Fleet Sales

PORTLAND, ORE., Oct. 18—Expansion of the fleet sales department of the Oakland Motor Car Company is announced by W. M. Warren, district manager.

G. M. Sales 12.2% Above Sept. 1927

Dealers Sell 148,784 Cars.
167,480 Sold by G. M.
7800 Cars Daily

NEW YORK, Oct. 15—General Motors dealers sold 148,784 cars to consumers during September, according to announcement from the office of Alfred P. Sloan, Jr., president. This is a gain of 12.2 per cent over September of last year but represents a slight decline from August figures of this year.

Sales of General Motors Divisions to dealers totaled 167,460 cars, an output of almost 7800 cars per working day, and represents an increase of 90.1 per cent over September of last year.

Detailed figures of dealers' sales to users for the first nine months of 1928 follow:

| | 1928 | 1927 |
|------------|---------|---------|
| Jan. | 107,278 | 81,010 |
| Feb. | 132,029 | 102,025 |
| Mar. | 183,706 | 146,275 |
| Apr. | 209,367 | 180,106 |
| May | 224,094 | 171,364 |
| June | 206,259 | 159,701 |
| July | 177,728 | 134,749 |
| Aug. | 187,463 | 158,619 |
| Sept. | 148,784 | 132,596 |

Goeke Willys Zone Manager

MILWAUKEE, Oct. 19—Paul D. Goeke, who has been associated with the Willys-Overland organization for seven years, has been appointed zone manager of Willys-Overland for the State of Wisconsin, with headquarters at the factory branch office at 110 East Wisconsin Avenue, Milwaukee. He formerly was wholesale manager of the Denver territory, later did special work for the regional office out of Chicago, and more recently devoted his efforts to dealer problems in Minnesota and western Wisconsin.

German Visitors Inspect G.M.

DETROIT, Oct. 22—Members of the Allgemeiner Deutscher Automobil Club of Germany, who are making a two weeks' tour of the eastern half of the United States, were the guests of General Motors Export Co., in Detroit, Saturday, Oct. 20. The morning was spent in visiting the Cadillac-LaSalle motor car factory and at noon the visiting automobile men were entertained at luncheon at the General Motors Proving Ground at Milford, Mich. During the afternoon a demonstration was staged to show the visitors how General Motors subjects its cars to severe tests before offering them to the public.

There are 150 members of the visiting delegation. Many of them are General Motors dealers in Germany in the territory of General Motors G.m.b.H., Berlin.

Sales Manager



W. Howard Winheim

The Manufacturers' Auto Equipment Co. of Pasadena, Calif., manufacturers and international distributors of the Tru-DruM lathe, announce the appointment of W. Howard Winheim as sales manager.

Mr. Winheim will devote his efforts in the field to the promotion of the Tru-DruM lathe in the interests of jobbers. With 16 years of experience in the automotive equipment field, Mr. Winheim is well fitted for the job.

Chaminade Transferred

DETROIT, Oct. 19—L. A. Chaminade, executive engineer of the Studebaker Corp. formerly in charge of the Erskine plant at Detroit, has been transferred to South Bend, where he will be in charge of both Erskine and Dictator.

Plane Manufacturers Merge

NEW YORK, Oct. 19—Keystone Aircraft Corp. of Bristol, Pa., and Loening Aeronautical Engineering Corp. of New York, have made arrangements to merge through the exchange of all outstanding shares of the Loening company for shares of the Keystone company.

The Keystone Aircraft Corp., which was organized in 1920, has built up its business primarily as a supplier of military planes for the United States Army and Navy and foreign governments. Its present production consists largely of bombing planes and training planes.

The Loening company has been manufacturing amphibians largely for navy use during the last few years but recently has manufactured a few passenger cabin amphibian planes for commercial use. The merged organization will complete the development of a large air transport for sale to the rapidly expanding commercial transport lines.

Dealers Stocks of Tires Increase

Balloon Volume Increases 12
Tires Per Dealer,
Others 4.9

WASHINGTON, Oct. 18—The average dealer in automobile and truck tire casings had 62.5 tires on hand Oct. 1, which was 4.9 tires per dealer greater than the stock carried on the same date in 1927, the Department of Commerce announces. According to preliminary statistics reported by 20,307 dealers the stocks of balloon casings averaged 42.7 per dealer, being an increase of 12 tires per dealer over last year and constituting 45.7 per cent of the total casings on hand. Inner tubes held by dealers averaged 102.7, as on Oct. 1, 1928, compared with 103.1 for Oct. 1, 1927.

Billings & Spencer Reorganize

HARTFORD, CONN., Oct. 19—At a meeting of the board of directors of the Billings & Spencer Co. the plan of reorganization was approved and adopted. The stockholders of the company are to have a meeting on Nov. 19 to take further action.

David J. Post was elected chairman of the board. A. H. Deute was elected vice-president and general manager, Frederick C. Billings, long identified with the company, remaining as president and treasurer.

Jordan Elects Officers

CLEVELAND, Oct. 18—The Jordan Motor Car Co. has just announced the organization of a new board of directors, and has revealed the fact that Jordan stockholders have subscribed to more than ninety per cent of the treasury stock recently offered. Edward S. Jordan, who has headed the company for the past twelve years, has been re-elected president, while John McArdle, expert in business management, who was with Chrysler for eight years, has been made vice-president and general manager. McArdle, before joining Chrysler, was associated with the Bethlehem Steel Corp. as an executive, later president of the Elgin Clock Co., and more recently assistant to the president of The Murray Corp. of America.

These executives will be supported by an exceptionally strong Board of Directors, including James Arthur House, president of the Guardian Trust Company, Cleveland; Joseph G. Fischer, vice-president of the Marine Trust Company, Buffalo; Roger Sherman of the firm of Tenney, Harding, Sherman and Rogers of Chicago, and director of the Continental Motors Corporation; T. Ernest Borton of Borton and Borton, Cleveland; and A. F. England, newly chosen as secretary and treasurer of the company.



Section of Dallas Automobile Show

Some of the passenger cars on display during the show. The show is held annually during the State Fair by the Dallas Automotive Trades Association and is one of the greatest held in the west. This year's crowds were the largest ever and a record business was achieved.

\$300,000,000 Texas Roads?

AUSTIN, TEXAS, Oct. 19—In his State-wide campaign in behalf of an amendment to the Constitution which will permit the State of Texas to issue \$300,000,000 of bonds for the construction of highways, Chairman R. S. Sterling of the State Highway Commission has found that the proposition meets with general favor among county officials. It has met with the endorsement of the Texas County Judges and Commissioners Association.

Baltimore Has Trade School

BALTIMORE, Oct. 20—With the co-operation of the automobile trade in Baltimore, the public school officials have opened a new vocational school for automobile mechanics in the old City College Building. Enrollment has been far in excess of the facilities. Both day and night classes have been established. A model shop and laboratory are features of the school. The officials plan to turn out mechanics thoroughly trained to step into the industry.

The school is unusual in its organization. Although conducted by the public school officials it also has the advantage of the ideas of an advisory committee made up of prominent men in the trade. This committee works in close cooper-

ation with the school officials. It was organized recently and is made up of John E. Raine, general manager of the Automobile Trade Association of Maryland; Walter F. Kneip, Franklin-Oldsmobile; Thomas G. Young, head of the Auto Supply Co.; Charles R. Gonce, Franklin; Thomas W. Wilson, Jr., Nash, and W. R. Carr, Dodge-Graham.

The trade is not only lending this cooperation to the school authorities but also has helped equip the institution and has supplied motors, chassis and other material for use by the pupils. Charles W. Sylvester, director of vocational education in the public schools, has direct charge of the institution. Millard C. Kent is the principal.

Durant Dealers Meet

MEMPHIS, Oct. 20—Durant dealers from Mississippi, west Tennessee and Arkansas held a fall meeting at Hotel Claridge here last Friday and heard in details the plans of the Durant Motors for 1929. Forty dealers were present. T. E. Jerrard, sales manager, made an interesting talk. W. S. Cook, manager of the St. Louis zone, and W. E. Sapp, Memphis district sales manager, and H. C. Campbell, of the Richardson Motor Sales Co., Memphis distributors, made brief talks.

Moto Meter Subs. Expands

LACROSSE, WIS., Oct. 19—National Gauge & Equipment Co., LaCrosse, Wis., subsidiary of the Moto Meter Co., Long Island City, N. Y., is rushing work on a two-story plant addition, 130 x 160 ft., and a new boiler house. Improvements will cost about \$100,000. Much of the additional area will be used to enlarge the output of the newly developed electric gasoline gage for the dash, which has been adopted as standard equipment by Chrysler, Hudson and Essex, Dodge and several other quantity builders of passenger cars.

Budd Service Station Expands

DETROIT, Oct. 18—H. & H. Wheel Service, Inc., Detroit distributor for Budd wheels, have leased a large building and a corner lot at Park and Peterboro, Detroit, just behind their store, where they plan to install a complete wheel shop for which there is said to be a strong demand.

The space around the building will provide parking facilities for a large number of customers' cars, and they are looking forward to a substantial increase in repair business, both wholesale and retail.

In addition to repairing they work on wheel aligning and shimmy problems.

Head D. A. D. A. S. M. A.



W. J. Phillips



S. P. Rice

W. J. Phillips, of the Miller-Judd Co., was elected president of the Detroit Auto Dealers Association Service Managers Association, at the annual meeting last Tuesday, succeeding E. L. Armstrong, of the Peter J. Platte organization. S. P. Rice, of John H. Thompson Co., was selected for the vice-presidency, succeeding Mr. Phillips. L. R. Alexander, of Wm. F. V. Neumann & Sons, former president, was reelected to the directorate. Two new directors named were S. W. Kennerly, Olds Motor Works, and Elmer Reinhardt, of the Richards-Oakland Co.

G. M. Personnel Movements

T. M. Lett, field representative of General Motors Export Co. in Chile, returned to New York from Valparaíso Oct. 15 on S.S. Santa Maria, for a visit to the home office and new assignment. He was accompanied by Mrs. Lett.

H. D. Eddy, assistant treasurer of General Motors South Africa, arrived in New York Oct. 16 on S.S. Minnetonka for a visit to the home office and General Motors factories.

E. M. VanVoorhees, assistant managing director of General Motors Brazil, arrived from Sao Paulo Oct. 10 on S.S. Western World, for a vacation and new assignment. He was accompanied by his family.

C. Lawson Woolsey, assistant to the managing director of General Motors Brazil, arrived from Sao Paulo on S.S. Western World Oct. 10. Mr. Woolsey is here for a holiday and will return to his post in about two months.

Arthur M. StMant, of the manufacturing division of General Motors Export Co., will sail Oct. 20 on S.S. Minnetonka en route to Antwerp where he will be attached to General Motors Continental as a welding specialist. George L. Ginger, also of the manufacturing division, will sail with his family on the same steamer en route to Berlin where he will be a welding specialist for General Motors G.m.b.H.

Frank McGill, of the service division of General Motors Export Co., arrived from Antwerp Oct. 16 on S.S. Arabic for a visit to the home office and factories. Mr. McGill is service and parts manager of General Motors Continental, Antwerp.

Frank King, of the service division of General Motors Export Co., will sail

from San Francisco Oct. 18 on S.S. Ventura for Melbourne where he will be engaged in service work for General Motors Australia, Ltd. He will be accompanied by his family.

Ernest A. Stephens Dies

NEW YORK, Oct. 18—Ernest A. Stephens, advertising manager and general contact man between the president and factory and sales force of the Dunlop Tire & Rubber Corp., died in Buffalo, October 10 from pleurisy. Mr. Stephens had long been prominent in the automotive industry, having been at one time on the editorial staff of Horseless Age and MOTOR AGE and is the author of several books on automobiles.

Durant Appoints Jury of Award

Prominent Names on Board to Judge Plans for enforcing Dry Law

NEW YORK, Oct. 19—W. C. Durant has announced the following committee as a jury of award in his \$30,000 prize contest for the most practicable plan to make the Eighteenth Amendment effective:

Jane Addams, William H. Allen, Senator William E. Borah, Bruce Barton, George Gordon Battle, the Rev. Dr. S. Parkes Cadman, Senator Carter Glass of Virginia, Major General James G. Harbord, William G. McAdoo, former Senator Robert L. Owen of Oklahoma, Dr. W. O. Thompson, G. P. Whaley and Rabbi Stephen S. Wise.

Peerless Foreign Contracts

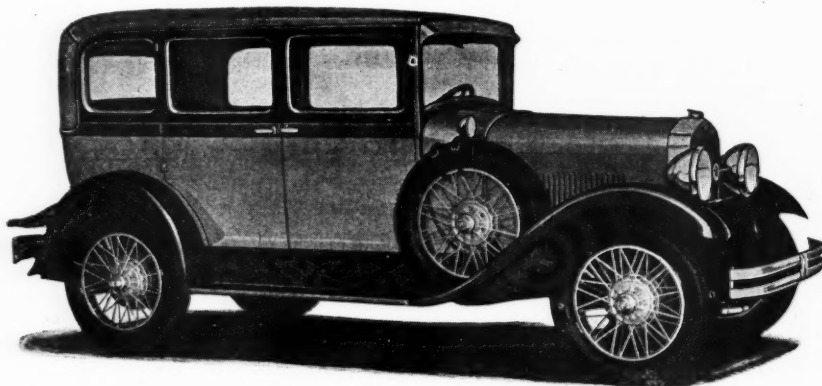
CLEVELAND, Oct. 19—A cablegram from France received at the Peerless factory in Cleveland reports large contracts for Peerless cars signed at an overseas dealers' meeting held in Paris on Oct. 11.

The meeting was called by R. M. Calfee, chairman of the board of directors of the Peerless Motor Car Corp., who made the trip abroad largely for this purpose. It was attended by all Peerless representatives in Europe.

According to the report of Mr. Calfee, there is a very real enthusiasm on the part of overseas dealers for American-built cars and a growing tendency for the better selling organizations of Europe to take on some well-known American make of car.

H. S. Gardner Visits Coast

PORTLAND, Oct. 18—H. S. Gardner, general sales manager of the Willard Storage Battery Co., has recently made a survey of coast cities.



Paris Sees Modern Art Car

At the international automobile salon in Paris this month this Erskine Six Royal Sedan was exhibited by Studebaker. Modern art is the decorative motif. The exterior is finished in silver lacquer, two shades of French violet and black with a modernistic pattern worked out on body belt and valance

River Cruise for Buick Pioneers

Group Sails From St. Louis Down Mississippi to New Orleans

The third annual meeting of the Buick Pioneers will be a cruise on the Mississippi River from St. Louis to New Orleans on the steamer Cape Girardeau, which has been chartered for the trip. The Pioneers will be the guests of F. W. A. Vesper, president of the Vesper-Buick Auto Co., one of the Buick pioneers.

The group assembled in St. Louis on Saturday, Oct. 20, and spent the day inspecting the Buick plants in the city and were then taken to Fredmar Farms, the country home of F. W. A. Vesper, where they were entertained until the departure of the boat. Stop-overs are being made at Cape Girardeau, Memphis, Helena, Greenville, Vicksburg, Natchez, Baton Rouge and New Orleans. At these points the Pioneers will land for sight-seeing and for play in the annual golf tournament which is one of the features of the meeting. These games will be played on the golf club courses in the above cities and the finals will be played off either at the New Orleans Country Club or at the Pine Hills Golf Club in Pass Christian, Mississippi, where the party will be broken up.

Six Buicks on Boat

Six new Silver Anniversary Buicks are carried on the boat for the use of the party in the various towns, and at the conclusion of the trip, a number of the members will use them to drive to their respective homes.

Each Buick Pioneer brings three guests who are members of his organization, and the meeting each year is held in the city where one of the Pioneers operates a Buick distributorship. Here the party inspects the buildings and operations of the host.

This organization is distinctly unique in the motor industry, as it represents the original distributors of Buick, and they are responsible for the sale of more than 100,000 Buick automobiles each year. Most of them have been in the sales organization actively, distributing the product of the Buick Motor Co. since its inception. C. C. Coddington, Buick distributor at Charlotte, is president of the Buick Pioneers, and F. W. A. Vesper, St. Louis, is secretary and treasurer.

E. T. Strong, president of the Buick Motor Company, Flint, Michigan—heads the party this year. His rise from a traveler for the Buick Buffalo Branch to the presidency of the parent organization has been one of the outstanding personal achievements in the automobile industry. Following his connection as traveler for the Buffalo Branch, he became manager at that point, and was later transferred to Indianapolis in the same capacity.

Advanced



R. S. Hoot

Mr. Hoot, for the past year Chevrolet factory district representative for Rochester, has been called by L. I. Stewart, Buffalo zone sales manager, to take a new district surrounding Buffalo.

From there he went to Chicago as branch manager, and was then transferred to the general office as sales manager at Flint, Michigan. Two years ago he was promoted to the presidency.

B & D Absorb Electric Co.

TOWSON, MD., Oct. 19—S. Duncan Black, president of the Black & Decker Mfg. Co., has announced the merging of the Domestic Electric Co., Cleveland, with the Black & Decker company. Domestic Electric manufactures fractional horsepower motors and through the acquisition Black & Decker becomes a self-contained unit manufacturing within its own plant practically all parts and materials.

Carl A. Duffner, president and general manager of Domestic Electric since the company was organized, will remain in that capacity. M. H. Spielman will continue as vice-president.

Model Store and Shop

DETROIT, Oct. 19—A model parts store and shop occupying 1050 square feet of floor space and designed and equipped in line with the latest and most approved merchandising methods, is a feature of the N. S. P. A. show. Complete plans for both the model store and shop have been worked out by Tom O. Duggan, merchandising service director, as an indication of the N.S.P.A.'s desire to keep its jobber members.

Selection of all merchandise used in either the store or shop has been made by lot drawing in the same manner that show space is allotted. The "parts house" occupies the entire end of the three center booths at the main entrance of the Exhibition Hall of Cleveland Auditorium.

Marmon Has New Vibration Damper

"High Frequency Oscillating Modulator" Name of Device

The Marmon Motor Car Co. has just announced the adoption of the new "high frequency oscillating modulator," a simplified, positive torsional vibration damper invented by Thomas J. Litle, Jr., Marmon's chief engineer. Both series of Marmon eights are now being equipped with the device in production quantities.

The modulating mechanism consists of a relatively light disk, accurately balanced and mounted on a specially prepared rubber base, and rotating at high speed on the front end of the crankshaft.

Its simplicity is probably the most unusual feature of the modulator. At the first indication of vibration through the crankshaft it begins oscillating, thus building up slight tremors and counteracting torsional vibration in the early stages, before it has reached an annoying degree. The oscillating action recurs at regular intervals throughout the speed range.

The modulator contains no adjustments, wearing parts, springs, bearings, friction surfaces or points to be lubricated.

The subject of vibration damping in modern high-compression, high speed engines has been one of Mr. Litle's particular studies for several years. He believes this vibration to be one of the most disturbing forms emanating from the modern powerplant, and laboratory experiments covering long periods of time have proved this factor to be one of the most important mitigating against the smooth operation of an internal combustion engine.

Sedley Brown Leaves Dodge

Sedley Brown, director of advertising for Dodge Brothers Corp., has resigned from this company to become associated with C. C. Winningham, Inc., national advertising agency. He will have charge of the newly organized sales promotion division. This is part of the Winningham program which also includes the establishment of an export department and a complete field service force designed to render greater service to old clients, whose business has greatly increased, and a number of new accounts.

To Finance American Sales

NEW YORK, Oct. 22—The First Foreign Investment Trust Company has incorporated the International Credit & Securities Corp. in Switzerland, to handle the financing of the sale of American products, primarily automobiles, in that country. The headquarters of this company will be in Zurich.



Arthur C. Storz,
president, A.E.A.

W. C. Hecker,
vice-president,
A.E.A.



(Continued from page 9)

Sessions of the thirteenth annual convention this year will be held in the Stevens Hotel, there being insufficient space at the Coliseum for both the show and the convention. A number of prominent speakers have been listed to appear on the program. Subjects of the most vital importance to the industry will be discussed and acted upon and sufficient room for group and committee meetings has been arranged by the committee.

Car makers were added to the list of those receiving invitations. Overseas representatives, as usual, are present, but

New Merchan A. E. A. Show

*All Space is Sold for 10th
Exhibit of Automotive Prod
Attendance*

otherwise the show will be "closed" as in the past. Two dealer nights, however, have been provided, tomorrow and Wednesday, and the features of these special sessions will be conducted much as has been the case in past years.

Demand for space came early, and so numerous were the applications that the entire lower floor, the south wing and the north hall of the Coliseum are to be used for display purposes.

Provided present plans are carried out, members of the Motor & Accessory Manufacturers Association will exhibit at the show for the first time.

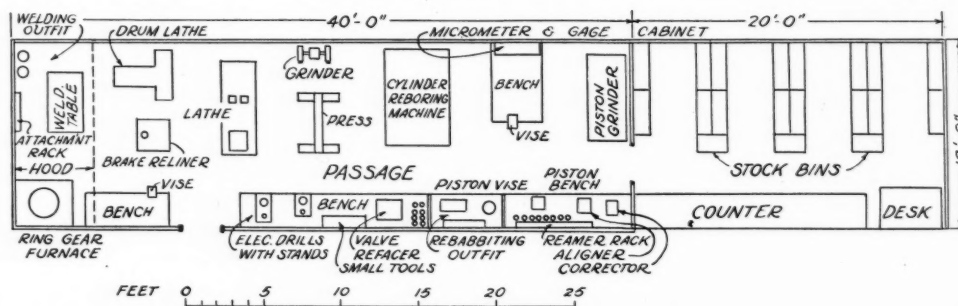
Interior decorations of the Coliseum this year far surpass the attractive interior that brought so much attention and comment at the show last year. The color scheme is light green with gold trimmings, while harmonizing colors are used for the ceiling and other overhead decoration. Draperies, bunting and lighting effects are more novel and original than at the show last year.

Details of arrangements for the show and convention have been handled by a committee composed of W. S. Isherwood, chairman, E. R. Seager, F. H. Suter, C. C. Secrist and George L. Brunner.

Greater Market Development will be given a prominent place on the program, the major part of tomorrow having been set aside for the activities of this division. It is planned to present reports of activities of Greater Market Development graphically, with a touch of the dramatic in its presentation. Benefits of the various services will be explained by those most directly affected by it, and unusual interest in the feature is assured.

Already there is registered one of the largest representations of the foreign automotive equipment industry ever to attend an American equipment meeting or exposition.

The Overseas Automotive Club is planning to make the export dinner at the Stevens Hotel on Wednesday night one of



Here's the layout of the Jobber's Mechanical service shop
at A.E.A. show now being held at Chicago

dis—*Ideal* Service Shop High Spots

Annual International Products; Record Is Forecast

the high lights of a brilliant week. A much larger attendance is assured for this year's banquet than the third annual dinner when 200 guests attended. This feature is rapidly coming to the front as a major attraction of the week's list of activities and it appears, from the evidence now at hand, that greater interest than ever is manifest and that a record number will attend the affair.

The program has been so arranged by the committee as to make possible attendance at the show in the Coliseum every afternoon. Convention activities for the most part will occupy the mornings of the week. On the Sunday preceding the



NEW Merchandise

ACCESSORIES, equipment, tools and parts exhibited at the Automotive Equipment Association's show, held this week at Chicago, are pictured and described on pages 22, 23, 24, 29, 30, 31, 37, 38 and 39 of this issue.

B. W. Ruark,
Commissioner
of the
A. E. A.

opening of the show and convention, the governing board of the International Boosters Club will meet at the Stevens Hotel. A

program will be the feature of the afternoon session, at which John F. Shuford, international president, will preside. B. W. Ruark, commissioner of the Automotive Equipment Association, will make one

of the principal addresses and others will speak.

Monday morning at 10 o'clock, the first session will open in the grand ballroom of the Stevens. The annual report of the president, A. C. Storz, will be the feature event. Mr. Storz will speak on the merger of the association with the Motor & Accessory Manufacturing

A. E. A. Show—Convention Facts

Date: Oct. 22-27.

Place: Chicago; Show at Coliseum; convention headquarters, Stevens Hotel.

Oct. 21. Meeting—International Boosters Club, Stevens Hotel.

Oct. 22. 10 a. m. President's annual report and address on merger with M.&A.M.A.

Oct. 23. 9.30 a. m. Manufacturers' discussion of organization of Division B of merged Association.

Jobbers' discussion of organization of wholesalers as Group C.

Oct. 24. Presentation of Greater Market Development program.

Oct. 24. Evening. Banquet of the Overseas Club.

Oct. 25. 9 p. m. "Night on Mars."

Dealer Nights—Oct. 23-24.

Association, and will explain the organization of the respective divisions of the merged body. There will also be an address by some national authority on industrial problems.

Three sessions will be held simultaneously at 9.30 o'clock Tuesday morning. The manufacturers division will discuss the organization of Division B of the merged association and outline a program of activity for this group. The jobber members will discuss the organization of the wholesalers as Group C. The subjects of the discussion being meeting chain store competition, branch store operation by wholesalers, and retailing by wholesalers. Former members of the M. & A.M.A., who sell only to manufacturers of motor cars, will discuss the organization of Division A at a special session to be announced.

On Wednesday morning the second general session of the association will be held in the Stevens, at which time, the subject of "Methods and Machinery of Distribution" will be presented by competent speakers and discussed. The Greater Market Development program will be presented at this time. Among the speakers already listed is Benjamin G. Eynon, registrar of motor vehicles for Pennsylvania, whose talk on the results of the Save-a-Life campaigns is expected to be one of the outstanding features of the G.M.D. presentation. L. H. Alexander, of Belleville, Pa., an automobile dealer, who also operates his own shop and sells parts and accessories at retail, will present the typical country dealers' side of the G.M.D. activities. A third speaker will be P. S. Snavelly, salesman at the Lancaster, Pa.,

(Continued on page 40)



By
GEORGE M. GRAHAM

Vice-President

Willys-Overland Co.*
Toledo, O.



and the capacity to devise and apply necessary methods when the critical situation finally arrives.

If we cannot recognize trends in this business, we are handicapped.

When we started in this business, there was no great problem of the used car, nor did any of us have any conception of the part eventually to be played by instalment buying. These were only two of the great movements that came upon us overnight.

There are just as many new things happening in this business today as happened 10 or even 5 years ago. This is largely due to the fact that our industry is peculiarly active. It goes ahead in surges. I wish, therefore, to direct attention to some of the trends that seem to have immediate importance.

Foremost in interest is, naturally, the increasing development of mergers. It is important to know what these mean

and what they may lead to.

Within the last 90 days we have seen a third great group suddenly take its place in the industry. We see Chrysler now third only to General Motors and Ford, this result having been accomplished by the purchase of Dodge Brothers and the inauguration of the De Soto company with an independent organization of dealers.

The absorption of Pierce-Arrow by the Studebaker company is another instance.

But there have been other mergers. Perhaps we have paid too little attention to the increasing movement which is bringing together the manufacturers of parts and accessories.

Within the last 17 months there have been mergers on the part of these firms having assets of \$250,000,000.

This development means many things. It means especially that manufacturers more and more are going to buy certain parts instead of making them. In this way they are saved from big plant expansion and heavy carrying costs. The fact that parts makers specialize on certain units with the natural development of a highly trained technical skill means a better product at a lower price.

This is an interesting reversal. To some extent it takes the industry back to the days when the manufacturer bought most of his parts and assembled them.

AS retail representative of the automobile manufacturer, the dealer carries heavy responsibilities. These apply not only to the dealer and his family, but to his organizations and also to the manufacturers who look to the dealer to get the full development from a given territory.

Upon his ability to analyze the big problems rests the possibility of future earnings.

No doubt we are in the selling era of the automobile industry. Engineering and production have ceased to be the great problems they were 10 years ago. All cars are reasonably good. Manufacturing operations have been carried forward to a point of high efficiency. Therefore, the great problem of the present is a selling problem. If a factory cannot have a steady flow of volume, the resources of a plan cease to be an asset and become a liability.

In the last analysis it is the dealer who creates the volume. Therefore, his place in the industry was never so important.

Yet it is a fact that we must not become contented and over-satisfied. It is an amazing thing in this industry how quickly a company can take a dominating place, and how quickly it can pass from a dominating place. This is equally true of the dealer, and I often think the explanation is in the inability to study trends and to analyze current developments.

What is leadership? What is the magic that enables a man to do marvelous things? It is largely this, the gift of forecasting coming developments

*From an address at the fourth Annual Convention. Ohio Council, N.A.D.A.

"Some Significant Trends in Our Industry"

With today's tremendous volume, there is more of a market for the facilities of the new combination of parts and accessories makers than ever there was before.

There will, naturally, be more mergers. Companies of equal potentialities will merge to increase the extent of their operations. Big companies will absorb small companies. Small companies will join their facilities in an effort to expand to a more nearly competitive basis with the bigger companies.

Some of these mergers will help. Some will have no effect at all, the determining factor in every case being product, prices and management.

Where does this big merger development leave the industry? We have heard many conclusions drawn. We have been told that the industry was segregating itself into a few hands. We have heard it said that there is no place for the independent, no place for the smaller company.

Let us examine the facts to see if this is true. Will there be a ruthless crushing out of the lesser elements? Is it a fact that in American business monopoly finally rules supreme? I am frank to say that I do not know of any illustration to prove it.

The United States Steel Corporation is a great company, but so are Bethlehem, Inland Steel, Youngstown Sheet & Tube, American Crucible and many others.

It took genius to develop the Standard Oil Company, but to say that it a monopoly entirely overlooks Sinclair, Texas, Tidewater, Shell and many others.

General Motors is a most notable combination, but there are half a dozen great independents.

As a matter of fact, in spite of all the talk about trusts and combinations, we have no monopolies in American business.

It is true that we have successfully united resources, but there is always a chance for the independent who has something to offer.

The smaller company of today is the great company of tomorrow, a fact that could be proved by the mere mention of three or four manufacturers who have gone ahead notably this year.

I do not believe that if the smaller company has the right product and prices, good management, good advertising and virile spirit, that there is any reason why it should not continue to be a profitable investment for its stockholders and its retailers.

The dealer may well ask how he is affected by the tendency of combinations on the part of manufacturers. This is a fair question and the answer is important to him. It is my own opinion that the dealer is less affected than anybody. No matter how big the combination, it must have outlets to the customer and retailing constantly becomes more and more of a neighborhood business.

The dealer who has resources, who knows how to sell and who works, is almost in a position to pick the account he wants.

The first thing that Mr. Chrysler did in connection with the absorption of the Dodge company was to proclaim to the public in a paid advertisement that the greatest asset that came to him with the purchase was the Dodge dealer organization. Naturally, he is too sound a business man to trifle with that splendid legacy.

Therefore, I would not worry about the possible effect of mergers. As a matter of fact, most of our worries are far less serious than we imagine. Control of the nerves and optimism are still invaluable assets to every man.

I have discussed one trend, mergers. A second trend now looming large on the

I OFTEN think we make a mistake in speaking of business too much in terms of profit and loss, of assets and liabilities. What we know of business is more than that. It is inseparable from every phase of human existence. It soars to the mountain top of every hope and it plumbs the depths of every despair. The hope of material reward guides the brush of the artist and spurs the brain of the writer.

"Business is the force that replaces one blade of grass with two, or three, or ten thousand. It paints the red of health into the baby cheek. It is upon the fruits of business, equitably distributed in wages, that we depend for the education of our children and who shall say how many an Edison or a Steinmetz may not have been lost to the country when a time of industrial depression dried the courses of prosperity.

"The permanency of our country depends on business, because we can only finance our national defenses through our prosperity.

"Business even deals in miracles, for it permits a man to stretch back a protecting hand over his loved ones, even from the grave itself.

"The man who strikes a blow at legitimate business is an enemy of the people, whether he talk from a soap box on a street corner, or from the highest halls of legislation; but the man who sincerely and honestly strives for the up-building of legitimate business and the equitable distribution of its fruits, performs the best service of practical patriotism that one citizen can render to another."

"SOME SIGNIFICANT TRENDS IN OUR INDUSTRY"

horizon is Mr. Ford. A year ago we all talked about him and wondered what his new product would be like and what the prices would be.

We expected him to hit top pace in 1928. His production has not been as large as was expected, but do not overlook the fact that he is gaining momentum all the time.

To make a profit after the most extensive change-over involved in a new production, he must get volume. You need have no doubt that he will get volume, and this in 1929 will affect the business of every manufacturer making automobiles selling under \$1,000. Here will be a competitive influence such as we have not had in two years. It is well to prepare to meet it now.

Trend of Body Design

Another most interesting trend is in the matter of body design. Everybody is trying to get a new and original body. It is no longer enough to have an efficient chassis. There must be beautiful lines and artistic appointments if the woman is to be pleased. Taste is a most personal thing. What may seem beautiful to you may offend my eye. Therefore, the skill of the expert who can decide what is likely to meet public preference was never so much in demand as now.

Another trend which may develop importance within the next 18 months is the question of the right time to bring out new models. This involves a most interesting study. It is a subject that admits of many varied viewpoints. It is not to be denied that companies who brought out new models in the mid-year are profiting by their wonderful business, but is it not a fact that the business of some of these companies suffered somewhat in May and June because of the knowledge that new models were on the way?

Many manufacturers are now beginning to ask the question as to whether it might not be better to slow up business in November and December, which are never good months, than to slow it up in May and June, which, without doubt, should be the best months in the year.

I have already heard quite a little discussion among manufacturers that it would be an excellent thing for the industry if we could return to the old practice of bringing out new models at the time of the New York Show.

In connection with this subject, it is only fair to remark that the handling of new models is much better than what it used to be, both from the standpoint of the manufacturer and the dealer. In former times it was not the practice to pay much attention to inventory. A manufacturer sold his current models up to the time he announced the new models and gave very little attention to the dealer's problem of moving his stock of obsolete models. Much more attention is now given to inventory. Many manufacturers have taken genuine sacrifices in order to clear their stock and those of the dealers by delaying new production. This seems to me to be very sound business. The manufacturer cannot get volume if the dealer outlets are clogged.

Another valuable development for dealer protection is the increasing tendency to rebate on cars in stock when price reductions are made.

I seem to see also a most important trend in the better handling of used cars. Do not misunderstand

me as meaning to say that the used car has ceased to be a problem. It is still a problem, of course, but it seems to me that some of the far-sighted dealers are getting a bit closer to its solution. I advise every dealer to read an article bearing the signature of Mr. Warren Griffith, and printed in a recent issue of the Automobile Trade Journal. This article deals with the question of used car marketing and in connection therewith Mr. Griffith has done some most substantial thinking. He advances especially the argument that it is lopsided to develop a new car sales organization of perhaps a dozen highly trained salesmen and to try to get along with two or three fourth class used car salesmen. By having as many used car salesmen, as new car salesmen, and by giving equal attention to their training, there is a better chance of moving the used cars that must be sold to clear the way for new car business.

These are subjects to which the dealer must give his best thought. Upon their proper solution his business largely depends.

It is also a fact, of course, that in order to get volume we must have the help of good business conditions. I should like, in conclusion, to briefly discuss this trend.

The story of 1928 is almost written. It is most amazing that the year has been highly successful in spite of the fact that we face the presidential election. There has always been a feeling that a presidential year exerted an adverse influence on business. Under our system of government we must bow to this storm every four years. Maybe we ought to have a six-year term and no re-election, but since we are dealing with present conditions, we must think what may be the influence of the political situation for the remainder of 1928 and for the year 1929.

I think everyone admits that never has there been a presidential year which exerted so little adverse influence on business.

In the automobile industry we are going to break every record. Already this year there have been two great specific gains for our industry. The first is the reduction of corporation income tax from 13½ per cent to 12 per cent and the second involves the elimination of the excise tax on automobiles, a result that gives a lower list price without any loss of profit to the manufacturer, the dealer or the salesman.

Political Situation Favorable

The presidential year is two-thirds gone, and we are only seven weeks from the choice at the polls. We have the advantage that is a straight two-party fight without the upsetting and disturbing conditions of 1924 when Senator La Follette ran as an Independent. Therefore, that much in the situation is favorable.

This does not mean that there will not be a lot of loose talk. In the next few weeks we will learn that our institutions are monopolistic; that our public men are crooks and that our people are ground down.

Election campaigns make the heyday for the scandal monger. Then he has his innings. But there is nothing new in all this. There has never been a time in our history when abuse did not mark our campaigns. You cannot pick out a name in the history of our country, be it ever so revered, but what that name has been a target for insult.

(Continued on page 34)

Showmanship PLUS a GOOD *Product Makes Sales*

SHOWMANSHIP, plus a good product, makes sales.

This is a maxim that G. A. Richards, president of the Richards-Oakland Co., Wayne County distributor of Oakland and Pontiac Sixes, firmly believes in.

He has proved it, and found it to be correct. For example, here is his latest plan, and it has worked out as per schedule.

Finding at Atlantic City an interesting collection of Indian relics, showing the progress of the Indian from the stone age days right up to the time the last campfires were extinguished, he immediately arranged to transport it to Detroit. The exhibit, owned by Charles F. Brown, well-known archaeologist of Toledo, numbered 12,000 pieces, and was set up in the Richards - Oakland showroom in General Motors Building the last week in September.

Publicity, advertising and the radio, making use of the Richards - Oakland Good Will Station WJR, soon let the people of Detroit know all about the exhibit, and the showroom was thronged. At stated intervals, Mr. Brown lectured, explaining all about the exhibits and telling

*G. A. Richards, Oakland-Pontiac
Distributor, Puts on a Novel Display
That Brings the Prospects*

the story of the Indian from the very beginning. Then, naturally, many would stroll about the salesroom, looking over the attractive exhibit of cars on the floor. Result—prospects and sales.

Incidentally, Mr. Richards has a peace pipe and tomahawk once owned by Chief Pontiac of the Ottawas and who ruled where Detroit now stands, which he purchased from Mr. Brown.

Noted authorities on Indian lore and tradition pronounced the exhibit to be one of the most complete in existence and hazarded the opinion that its equal was

to be found only in one or two museums in the country.

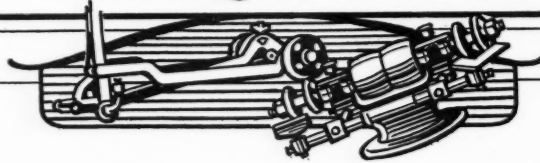
Particularly noticeable was the unusual coloring and delicacy of design and workmanship shown in the many pieces exhibited. Although the Indian was apparently acquainted with only the primary colors, of which he made excellent use, he showed an unusual aptitude for design and it is doubtful if he has been surpassed in this respect by any other primitive race. Certainly the specimens shown in the exhibit bore out this statement.

A bit of color was added to the exhibit by the presence of Chief Awazbwazquan.



Chief Awazbwazquan and Chas. F. Brown

SHOP EQUIPMENT



Smith's Garage Special No. 2

Maker's Description—The Garage Special, known as No. 2, is a complete outfit specially designed for garages and service stations. While nothing unnecessary is included, the outfit is unusually complete and designed to handle every kind of work that comes to the service station. Re-



tail Price—\$77.50. **Maker**—Smith Welding Equipment Corp., 2619 Fourth St., S. E., Minneapolis, Minn. **Selling Help**—Envelope stuffer, complete catalog showing all equipment.

Grease Pump



Maker's Description—The Dot Little Giant grease pump is a 5 lb., one-man operated pump for automobiles, buses, taxicabs, trucks, airplanes and heavy duty industrial machinery. It develops up to 10,000 lb. pressure at the nozzle; weighs only 23 lb., filled; and is equipped with genuine Alemite, Zerk and Dot nozzles. The pump is light and easy to handle and small enough to stand upright under any truck or car.

The foot plate is of hard wood, which is lighter and more serviceable than cast iron. The entire pump unit swivels in the grease tank so that the handle may be worked at any angle to the base without changing the position of the pump. **Retail Price**—\$47.50. **Maker**—Dot Lubrication Division, Carr Fastener Co., Cambridge, Mass. **Selling Help**—Descriptive folder.

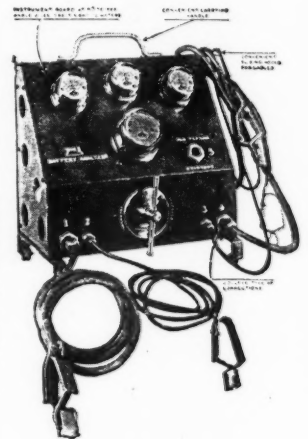
Chamois Wringer

Maker's Description—This chamois wringer is supplied with initial orders for twelve Strongarm sponges and twelve Strongarm chamois. The wringer is well made and fits on any bucket or barrel. The reason for distributing this

is to prolong the life of the chamois. **Retail Price**—\$54.00—dozen lot discount of 33 1/3 per cent, making net cost \$36.00. **Maker**—Schroeder & Tremayne, Inc., 500 N. Commercial St., St. Louis, Mo.

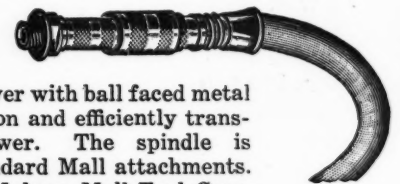
Pier Battery Analyzer

Maker's Description—This equipment includes every meter necessary for thoroughly testing any storage battery. It also includes a variable carbon rheostat for high rate discharge battery. Furnished with four leads, two heavy cables and is so hooked up as to give voltage readings on three cells at the same time. This equipment can also be used for testing starting motors. **Retail Price**—\$35.00. **Maker**—Pier Equipment Mfg. Co., Benton Harbor, Mich.



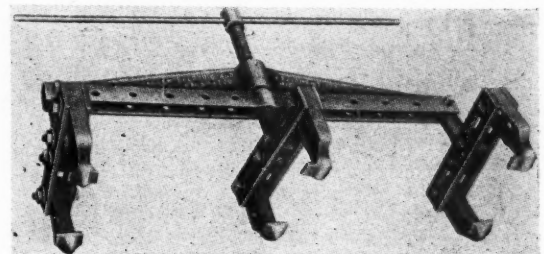
Mall Attachable Shaft

Maker's Description—Mall Attachable Shafts, known as No. 2220, are suitable for use with motors of from 1/8 to 1/3 hp. The shaft adapter is built to clamp quickly on the motor shaft without the use of special tools or machine work. The shaft has a sturdy green rubber cover with ball faced metal lining eliminating friction and efficiently transmitting maximum power. The spindle is adapted to take all standard Mall attachments. **Retail Price**—\$35.00. **Maker**—Mall Tool Company, 7740 So. Chicago Avenue, Chicago, Ill. **Selling Help**—Envelope stuffers, standard catalog sheets, metal sign.



Allen Universal Frame Straightener

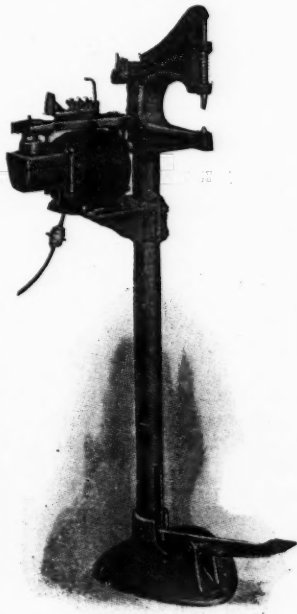
Maker's Description—This heavy duty outfit will straighten practically all twisted and bent frames without removing the body or engine. It exerts from 15 to 22 tons pressure. They are adjustable, enabling the operator to work efficiently



in limited space. This equipment also straightens twisted front axles. **Retail Price**—\$54.50 complete. **Maker**—Allen Electric & Equipment Co., Kalamazoo, Mich. **Selling Help**—Instructive jobbers' catalog page showing many uses.

Davis Brake Reliner

Maker's Description—The Davis Apex Model "A" combines the countersinking and riveting operations in one machine. The hole in the band can be located and the drilling and countersinking of the lining is performed in one operation on any type brake band or shoe, regardless of size or shape. The countersinker is absolutely free from obstructions above the drill, thus permitting the entrance of the most awkward kinds of brakes. There are no hand levers or foot pedals to operate and all adjustments are set, leaving the operator's hand free to handle the work. The countersinker is equipped with cutters for $\frac{3}{8}$ head rivet having $\frac{5}{32}$ in. shank or $\frac{3}{16}$ in. shank. It is operated by $\frac{1}{4}$ hp. A.C. motor and the drive is direct through miter gears running in grease. The riveter is equipped with one No. 2 rivet knockout die, one No. 6 rivet head anvil and one No. 8 rivet star set, one No. 10 bracket, to mount countersinker, one No. 12 bushing, one No. 13 rivet roll set, for $\frac{5}{32}$ shank rivet, one No. 15 rivet roll set for $\frac{3}{16}$ shank rivet. Shipping weight, 145 lb. **Retail Price**—\$68.75. **Maker**—Davis Brake Co., Sedgley Ave. below Diamond St., Philadelphia, Pa. **Selling Help**—Folders.



clean hot flame of any size from fine needle point to blow-torch proportions. **Retail Price**—\$23.50. **Maker**—Minn-Kota Foundry & Mfg. Co., 201 Second St., North Fargo, S. D.

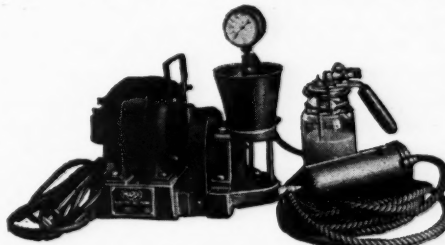
Ammco Cylinder Grinder

Maker's Description—The Ammco Rigid Cylinder Grinder is of the five-stone type and is produced in two styles, Model D with screw driver adjustment and Model E with external dial adjustment. One tool with five sets of stone carriers will handle all cylinder bores from $2\frac{1}{2}$ in. to $5\frac{1}{2}$ in., the passenger car range being handled by one tool and only three sets of stone carriers. The tool is ruggedly constructed of hardened steel throughout and maximum cutting speed and positive accuracy are assured by the smooth chatterless action of the tool. The grinder may be operated by any $\frac{5}{8}$ " or $\frac{3}{4}$ " portable electric drill. **Retail Price**—Model D with one set of stone carriers, \$35.00. Model E—\$45.00. Extra stone carriers, any size, set of five, \$10.00. **Maker**—Automotive Maintenance Machinery Co., 816 W. Washington Blvd., Chicago, Ill. **Selling Help**—Catalog sheets, folders.



Mardo Paint Sprayer

Maker's Description—The Mardo Electric Paint Sprayer is a complete portable, motor-driven, paint-spraying unit. It is guaranteed to develop 75 lb. air pressure. Detailed descriptions of the different units are given in the company's catalog pages. **Retail Price**—Complete without pressure gage \$64.00. Pressure gage, \$2.00 extra. **Maker**—Demco, Incorporated, 105-115 So. Calvert St., Baltimore, Md. **Selling Help**—Inserts for jobbers' catalogs.



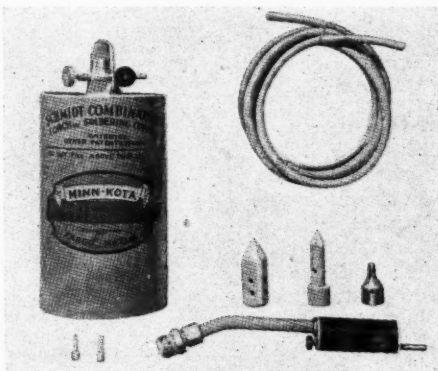
Korect Air Meter

Maker's Description—The Korect Air Meter attaches to the end of the air hose and fills and gages the tires in one operation. Installation can be readily made in ten minutes. The gage is always in sight and registers accurately. **Retail Price**—\$20. **Maker**—Korect Air Meter Corporation, Buffalo, N. Y. **Selling Help**—Letter folders, envelope stuffers, post cards, portfolio covering advertising campaign, reprints of ads, jobbers' catalog sheets, jobbers' bulletins.



Schmidt Torch and Soldering Copper

Maker's Description—The Schmidt Torch and Soldering Copper outfit consists of gasoline tank with generator valve, 10 ft. durable rubber generator tubing, torch with handle and flame regulator, three burner nozzles, two soldering coppers, one lead-burning tip. It is used in garages and repair stations for general soldering, radiator repairs, lead burning, electrical work and tinsmithing. The torch burns dry gasoline gas created in the special Schmidt Valve without generating. It instantly furnishes a clear,



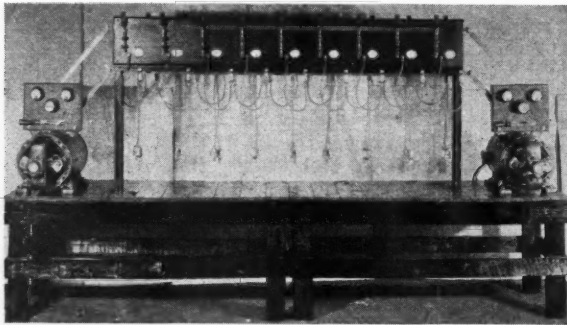
Mall Counter-Shaft Machine

Maker's Description—This is a swivel machine for the larger auto body shops and those shops requiring a machine with a variable range of speed. The motor is ball bearing rated at $\frac{1}{2}$ hp. The range is from 1200 to 3450 r.p.m. This machine is mounted on a rolling star-shaped-caster base pedestal. This is one of the many Mall flexible shaft machines made as there is one for practically every service operation. **Retail Price**—\$160.00 with straight hand spindle. **Maker**—Mall Tool Company, 7740 So. Chicago Avenue, Chicago, Ill. **Selling Help**—Envelope stuffers, standard catalog sheets, metal signs.

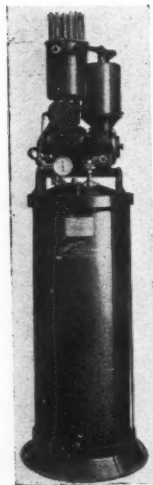


Rochester Charging Equipment

Maker's Description—This equipment will handle 18 six-volt batteries or 9 twelve-volt batteries at a time. Three rates of charge are provided for six-volt batteries and five



charging rates are available for twelve-volt batteries; an individual meter indicates at all times the current being taken by the battery. If only a small number of six-volt batteries need recharging but one generator should be operated at a time. **Maker**—Rochester Electric Products Corp., 85 Allen Street, Rochester, N. Y.

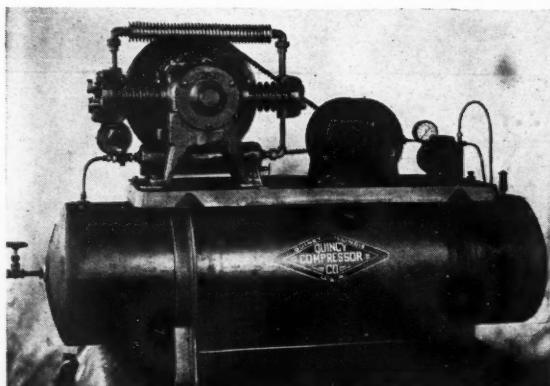


Spohrer Compressors

Maker's Description—The new Spohrer Compressor is a 2 hp. unit which has all the features and advantages of the older models. It is mounted vertically on a 60 gal. tank, is water-cooled, having a two gal. capacity water jacket around the cylinder and cylinder head. An extra thermosyphon water cooling system is included, which makes this compressor suitable for heavy continuous duty. It is a direct-driven unit, ball bearing throughout, and designed for operating air lifts, pressure greasing, spray painting and other continuous duty operations. **Maker**—Weber Auto Accessory Company, 210 Sylvan Ave., Newark, N. J.

Quincy Compressor

Maker's Description—The latest single and two-stage small automatic compressors for use in garages and filling stations are furnished with V-type motor and compressor pulleys and belt. There is no idler and no spring on the motor base resulting in absence of strain on the motor



bearing as the belt runs loose enough to eliminate this result, but still has enough tension to operate the com-

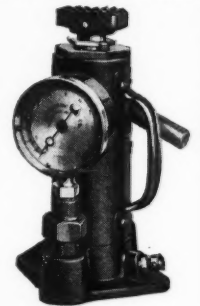
pressor. Provision is made for tightening the belt if it ever becomes necessary by moving the compressor on the base. **Retail Price**—varies from \$164.50 to \$255.50. **Maker**—Quincy Compressor Co., Quincy, Ill.

Blackhawk Products

Maker's Description—The line of Blackhawk jacks has been augmented through the addition of a new 3-ton motorcoach jack, Model A8.5, and a passenger car jack, known as the Allcar Model No. J10. There is also a full line of gage-equipped jacks for determining weight of loaded trucks or strength of concrete or vitrified pipes; testing concrete beams for bending or shear; press work and many other uses where total weights or pressure per square inch is desired. Jacks may be equipped with gages of any size or tonnage and with graduations to suit the needs for industrial, laboratory and experimental tests.

For the Ford Model "A" there are several new tools designed to meet the requirements of the mechanic or car owner.

There is also a line of double hexagon sockets in popular sizes. The standard mechanics' sets may be had with the new sockets if desired. These sockets have the long slim nose, allowing work in close quarters, and are properly heat-treated to prevent rounding out and yet tough enough so that they will not crack or split. **Maker**—The Blackhawk Mfg. Co., Milwaukee, Wis.



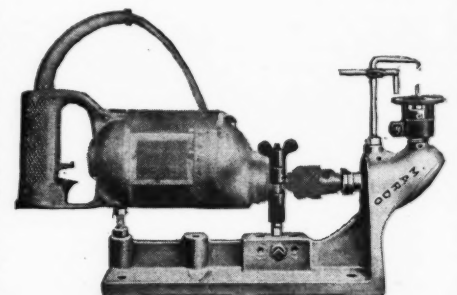
Grease-Rite

Maker's Description—Grease-Rite, a new super high pressure grease gun, is designed for use in garages, service stations and for the individual car owners. It is light in weight, portable and easy to handle. Pressure as high as 8300 lb. is built up by means of a telescopic double-acting cylinder which multiplies the initial force supplied to the barrel. The gun is operated by pushing the barrel forward and the desired pressure and volume can be regulated by simply pushing a long or a short stroke. It is manufactured in three sizes. No. 1 gun is for the car owner, while Nos. 2 and 3 are for service stations. **Retail Price**—No. 1 gun, \$7.50. **Maker**—Grease-Rite Corp., Cleveland, Ohio.

Mardo Brake Lining Machine

Maker's Description—Simplicity, accuracy and speed are features claimed for this drill and countersinking machine. It is designed for use with any 1/4 in. to 5/16 in. portable electric drill. It is suitable for use on all types of internal and external brake shoes and bands. It has an adjustable stop for locating the rivet hole. **Retail Price**

—\$18.00 without drill. **Maker**—Demco, Incorporated, 105-115 So. Calvert St., Baltimore, Md.



FIFTY

Salesmen Can't Supply Him With ENOUGH Used Cars

By PRESLEY E. BRYANT

ESTABLISHMENT of a reconditioning plant, where used cars are given factory treatment by specialists, has resulted in a 50 per cent increase of used car sales by a Texas dealer.

The Shelton Chevrolet Company of Dallas, Texas, opened its reconditioning plant in January, 1928. Subsequent sales impetus has resulted in the setting of a 3000 car quota for the year, as against 2000 cars sold in 1927.

The plant, located at 2601 Williams Street, employs 41 mechanics, body, paint and trim men, who handle nothing but Shelton Chevrolet Company's used cars. As many as 375 cars have been reconditioned there in a single month.

Operation of the plant, planned by Ray Shelton, has won a national reputation for J. W. Beazley, Jr., general manager of the Shelton company's used car business. Automobile dealers from many parts of the country have visited Dallas to study the methods used, both in the conditioning plant and in the retail stores, and

one dealer, a New Orleans man, made the trip to Dallas by airplane solely to get first hand information from Beazley on the ways of his organization.

Beazley inspects every used car taken in on trade by the Shelton Chevrolet Company. It is sent direct to the reconditioning plant, as soon as the trade is closed, and carefully gone over to ascertain its exact condition. The cost of repairs is then figured and it is decided whether it is worth the price of reconditioning. If it is, it is put on to what Beazley calls his used car line and subjected to a regular factory production process of mechanical treatment.

Motor, transmission and rear end are overhauled as needed by men accustomed to doing this work. While it is going on, other men remove and recondition the starting motor, generator and other electrical parts. If necessary, new tops, upholstery and paint are provided.

An invariable rule is that new rubber is put on wherever a tire is worn down through the tread. Old

(Continued on page 32)

J. W. Beazley, Jr.
General manager of the used car stores and reconditioning plant of Shelton Chevrolet Co.



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
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| MISC. | 1 | 2 | 2 | 5 | 2 | 3 | 2 | 2 | 3 | 1 | 2 | 2 | 1 | 3 | 2 | 5 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 6 | 3 | |
| TOTAL SALES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**AUGUST
1928 A
BANNER
MONTH
FOR
SHELTON
CHEVROLET
CHAIN
USED
CAR
STORES**

August was the banner month for the two used car stores and one lot maintained in Dallas by the Shelton Chevrolet Company, when the official bulletin board showed that the 20 used car salesmen had sold 334 cars



Arthur H. Means, assistant secretary of the contest board of the A.A.A. gives the signal ending the Studebaker test run

How STOCK

*This Article Answers
the Question*

BY JAMES W. COTTRELL

PERHAPS you are one of those who believe that stock cars competing in races and taking part in long distance trials are not strictly stock. Maybe you think that the stock car rules do not mean anything or that they are not enforced if they do. Possibly you think that the American Automobile Association permits a lot of changes in stock cars running under its sanction. You may believe that you could do a lot of work on a stock car to increase its speed without fear of detection. On the other hand, you may not have thought very much about the status of stock cars but would like to know what steps, if any, are taken by the A.A.A. to make sure that stock cars entering competition and trials are strictly stock.

We shall not start, nor seek to settle, any arguments on the subject. We shall give you the definition of a stock car, taken from the rules of the contest board of the A.A.A. and relate to you the manner in which the Contest Board or its representatives check vehicles offered as stock. When the information is complete, you can draw your own conclusion.

Let us hear first from Arthur H. Means, assistant secretary of the Contest Board of the A.A.A. He is too well known among followers of automobile racing to need any introduction. Many stock car events, including the recent Auburn 24-hour trial and the Stude-

baker 30,000-mile run at the Atlantic City Speedway, were conducted under his direction. Mr. Means has this to say:

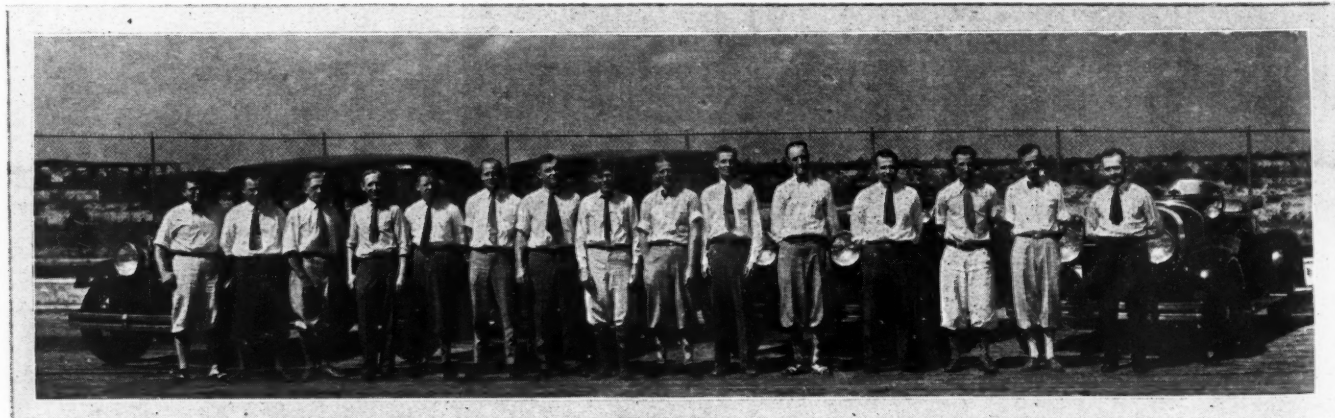
"I can appreciate that there are people who question the absolute stock status of cars that perform as the Studebaker Presidents did in the recent 30,000-mile run.

"Were it humanly possible more accurately, intelligently and minutely to check and examine these stock cars to establish them as such, no stone would be left unturned to do it."

The question "What is a stock car under A.A.A. rules?" may well be settled now before we hear more from Mr. Means. According to the Stock Car Rules of the Contest Board of the A.A.A. a stock car is "a manufacturer's model of car that is in regular production, is regularly cataloged in the current catalogs of the manufacturer, is advertised in the regular schedule of advertising and is identical in technical details and in other respects with the required production of said model as specified in the following rules:

"It is the intent of these rules that a stock car for competitive test or any other form of test shall be a recognized production model of the manufacturer and that it shall contest only as manufactured, advertised and sold, to the end that public confidence in stock car contests be improved."

Keeping in mind this definition of a stock car let us see what the Contest Board or its representatives do to see that the rules are obeyed. The rules require that the manufacturer of a stock car must file with the Contest Board technical specifications, blueprints of camshaft, cylinder heads and pistons and catalogs



OFFICIALS of the American Automobile Association which sanctioned and supervised the 30,000-mile run of four Studebaker Presidents on the Atlantic City Speedway July 21-August 9. The officials from left to right: Capt. R. A. Leavell, A. H. Means, Ralph B. Harlacker, P. N. Bookmeyer, L. C. Dick, W. K. Tobolt, Joseph Dawson, Frank Ripplingille, J. K. Shell, Jr., H. R. Bowen, Thomas Galligan, J. Stevenson, J. H. Roach, I. H. Harnden and Leonard Tammo

is a STOCK CAR?



***EACH** time a Studebaker car crossed the tape, during the recent 30,000 mile run at the Atlantic City Speedway, it tripped an electric timing tape and a record was made by the instruments illustrated in views 1 and 2. The clocking devices are accurate to the fraction of a second. Two were in constant use—as a double check. Three A.A.A. judges supervised the timing night and day. When the American Automobile Association certifies a car as a stock model, they know it's stock. Figures 3 and 4 show members of the technical committee picking out President Eight motors from the Studebaker factory assembly line. The motors and chassis they selected were those used at the Atlantic City Speedway in the President's endurance feat of 30,000 miles in less than 27,000 minutes. If not chosen for this test, these regular factory Presidents would have gone out to the dealers and would have sold in Studebaker showrooms.*

HOW STOCK IS A STOCK CAR?

and other sales specifications so that the board shall be able to establish the exact status of cars of this model.

Actual checking and examining of cars is done by a Technical Committee appointed by the Contest Board. Concerning the manner of conducting this examination we quote Paul Dumas, technical editor of *AUTOMOBILE TRADE JOURNAL*, and the chairman of the Technical Committee for the Eastern Pennsylvania district, to this effect:

The Technical Committee checks each car against specifications supplied by the factory to the National Automobile Chamber of Commerce and these specifications must be accompanied by blueprints. Blueprints show the cylinder head, manifolds, pistons and carburetor. If prints are not available, the Technical Committee asks for a car from a dealer's floor for comparison. From blueprints and other information the manufacturing tolerances and stock clearances allowed by the factory are determined.

The first step is to write down the chassis and engine number and to check each of the accessories on the car against the manufacturer's catalog. This check includes windshields, bumpers, bumperettes, spare tires, etc.

The engine and rear axle are checked thoroughly and carefully. In checking the engine, the cylinder heads, oil pans, connecting rod and piston assemblies, radiator, timing case cover, inlet manifold, exhaust manifold and carburetor are removed. After the head has been taken off, but before the other parts are removed, the compression ratio is checked by two methods.

After the head is removed, all carbon is carefully removed from the head, pistons and valves in two cylinders on a 6-cylinder engine, three cylinders on an 8-cylinder engine and two cylinders on a 4-cylinder engine. Valves on the cylinders are carefully lapped in. Top dead center is determined, irrespective of marks on the flywheel, by means of a dial gage which is supported directly over the piston and this dead center position is marked on the flywheel for the future reference. The cylinder head is then reinstalled. The engine is then cranked by hand with the spark plug out till one of the pistons in the cylinder to be checked is on top dead center.

A piece of $\frac{1}{8}$ in. copper tubing is then placed in the spark plug hole and kerosene or a light cylinder oil is poured through the spark plug hole up to the second or third thread in the spark plug hole. The amount of liquid poured in is measured by marks on a glass graduated in units of two c.c. The purpose of the $\frac{1}{8}$ in. tubing is to provide an air vent for the combustion chamber. It is removed before the last of the liquid is poured in. The purpose of this part of the operation is to determine the displacement of the combustion chamber with the piston on top dead center. To make the figure even more accurate, the space between the top of the piston and the cylinder wall above the top ring is packed with graphite paste.

The operation of filling up the cylinders is repeated on two or three cylinders, previously selected for test.

After the liquid has been poured into the cylinders, it is drawn off and the head is removed, following which the stroke of the piston is determined, by means of a micrometer depth gage. The bore of the cylinder is determined by inside micrometers, readings being taken at four points during the stroke and at two dif-

ferent diameters at each level. By calculation the displacement of the piston for each cylinder is determined. The piston displacement added to the capacity of the combustion chamber on top dead center, divided by the capacity of the combustion chamber on top dead center gives the compression ratio.

A second method of determining compression ratio is used as a check on the first. In this method the cylinder head is removed, turned upside down and the compression space is filled with liquid. The volume of the valves projecting above the cylinder block and that of the cylinder head gasket are calculated from measurements. An allowance also is made for the amount which the piston is above or below the top of the block at top dead center. The calculation of compression ratio is made in the same manner as the first method.

Valve timing is checked by setting tappets to standard clearance and then noting the point of opening and closing of the valves. These points are determined not by the factory flywheel marks but by contact of the valve head with a dial gage supported over the valve. The lift of the valve is measured in the same fashion. Opening and closing are plotted on the flywheel and compared with factory specifications.

Cylinder bores are measured at three points throughout the stroke and each land of each piston is "miked" to determine clearance. The piston pin also is measured, as are the connecting rods and bearings and the finish of rods is compared with stock rods from a dealer's parts stock.

Valve springs are "weighed" in comparison with springs bought from a dealer and they must register within plus or minus $\frac{1}{16}$ in. from position corresponding to valve open to valve closed.

Main bearing caps are removed and grooving, finish and dimensions compared with factory standards. Oil pump gears are examined for diameter, pitch and material. The engine front-end case cover is taken off and the chain or gears examined.

Special precautions are taken to insure that manifolds are stock. The finish of interior passages, diameter of passages and size of valve ports are checked. The carburetor is taken apart and venturi and other internal parts compared with standard. Any jet offered as an option by the manufacturer may be used.

This concludes the examination of the engine and it is reassembled and sealed by wire and freight-car-type lead seals. These seals are applied to front-end gear case, manifolds, carburetor, cylinder head and oil pan.

We are through with the engine, but that is not all. The radiator core is measured for length, height and depth. Other parts of the cooling system examined are the thermostat, if any, fan belt and pitch and diameter of fan blade. The clutch is examined through the inspection plate, but is not removed.

After the transmission has been drained and cleaned the covers are taken off and the gears examined. Gear ratios of the transmission are not checked for long distance events, but for short events or hill climbs the ratios in first, second, third and reverse are checked by counting the teeth in the gears.

Front and rear wheels and their bearings are removed and examined and compared with specifications. The rear axle is opened up and the differential removed

(Continued on page 32)

ACCESSORIES



Bigler Trunks



Maker's Description—Only three sizes in the new Prestite Trunks are required to take care of 88 different model cars and 75 per cent of all car sales. Prestite is a new and different motor trunk material, said to be rumble, rattle and rust-proof as

compared to metal and easy to clean and free from blistering and molding as compared to imitation leather covered trunks. **Retail Price**—The regular DeLuxe model Prestite sells for \$35.00, while the standard model sells for \$30.00. **Maker**—Bigler Mfg. Company, Chippewa Falls, Wis. **Selling Help**—Envelope stuffers, jobbers' catalog inserts.

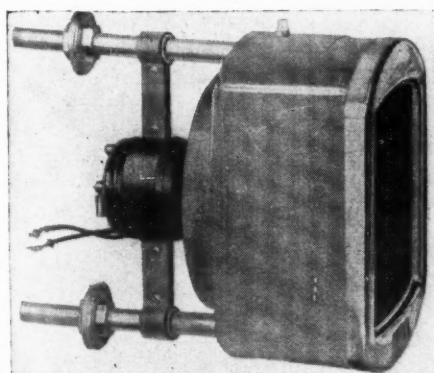
Cuno Cordless Lighter

Maker's Description—The new Cuno cordless electric match, No. 1608, is made of Bakelite with nickel trim. It is mounted to the instrument board and held in place



by a concealed set screw. Contact is made by pressing a button. When the element is hot the head can be removed and passed around. **Retail Price**—\$1.75 each. **Maker**—Cuno Engineering Corp., Meriden, Conn.

Hadees Car Heater



Maker's Description—The Hadees car heater consists of a small hot water radiator which mounts on the back of the dash and through this hot water from the engine circulates. A small electric fan which draws no more current than a tail light forces

air through the radiator, thus producing uniform warmth throughout the car. **Retail Price**—Universal sedan model \$35.00. **Maker**—Liberty Foundries Company, Rockford, Ill. **Selling Help**—Envelope stuffers, broadside specification sheets, jobbers' catalog sheets.

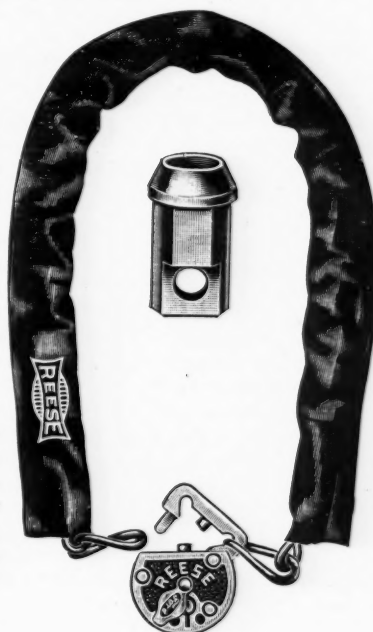
Wedford Rattania Seat Covers

Maker's Description—Special corner construction of the Wedford Rattania Seat Covers eliminates multiplicity of sizes required to fit all cars from stock. Wedford Rattania

is a woven fabric of fine texture. The covers are permanent and not affected by heat, water, sunlight, cold, oil or grease. **Retail Price**—Roadster and coupe \$9.75; Coach \$20.25; Sedan \$21.50. **Maker**—The Wedler-Shuford Company, 1116-1124 So. Grand Blvd., St. Louis, Mo. **Selling Help**—Descriptive leaflet.

Reese Spare Tire Lock

Maker's Description—This special spare tire locking chain for Model 1928 Ford has a heavy solid brass lock with shackle, attached permanently to one end of the chain and with the lug to secure the locking bolt. This is supplied with 28 in. of heavy No. 2-O twist link covered chain. This combination locks both the spare wheel and tire. **Retail Price**—\$1.25. **Maker**—Reese Padlock Company, Lancaster, Pa. **Selling Help**—Descriptive sheet.



Pass-A-Lite

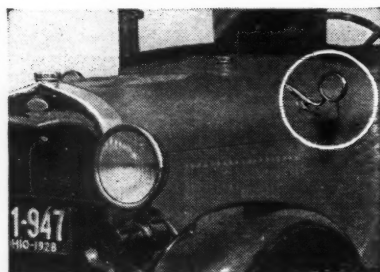
Maker's Description—The Stewart-Warner Pass-A-Lite is a cigar and cigarette lighter with a black and red mottled heating bowl mounted on a nicked base. Although this lighter operates from the battery of the car, it has no wire connections to the heating bowl. The heating element is brought to a red glow by depressing the heating bowl in its socket for a few seconds. It can then be removed and passed around. **Retail Price**—\$2.50. **Maker**—Stewart-Warner Speedometer Corp., 1826-1852 Diversey Parkway, Chicago, Ill. **Selling Help**—Attractive packages carried in counter display box, envelope stuffers, jobbers' catalog inserts.



Step Plates

Maker's Description—A variety of aluminum step plate frames, some with kick type back and some flat, are being introduced. These come in a wide variety of patterns, fully illustrated by catalog pages. Other items include a rumble seat step plate, running board signal lamps, body protection rails and accelerator pedals. **Maker**—National Aluminum Company, Racine, Wis. All sales are handled through the Zinke Company, 1323 So. Michigan Blvd., Chicago, Ill. **Selling Help**—Jobbers' catalog inserts, display boards, folders.

Victor Side Lamps

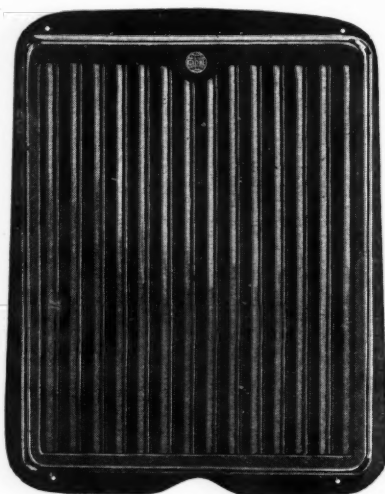


Maker's Description—The new Victor side lamp for the Model "A" Ford are all brass and heavily nickel plated. They are equipped with prismatic lenses. A nickel plated $\frac{1}{4}$ in. conduit carries the wires. **Maker**—Cincinnati - Victor Company, 712 Reading

Road, Cincinnati, Ohio. **Selling Help**—Descriptive sheets.

Globe Vertical Blade Shutter

Maker's Description—In line with the present vogue in radiator design, the new shutters are being supplied with vertical blades. Control is from the dash. These shutters are made for all cars. **Retail Price**—\$6.50 for Ford, Whippet and Chevrolet. All others \$11.00. **Maker**—The Globe Machine & Stamping Co., 1200 West 76th St., Cleveland, Ohio. **Selling Helps**—Envelope stuffers, direct mail pieces, folders showing complete advertising campaign.



Atlantic Tow Line

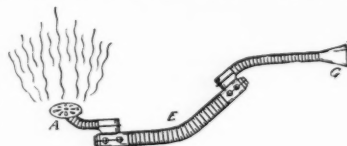


Maker's Description—The Atlantic automobile tow line consists of twelve feet of special alloy steel tape, packed in a heavy metal container. **Retail Price**—\$1. **Maker**—The Atlantic Tow

Line Mfg. Co., 509 Boardwalk, Atlantic City, N. J. **Selling Help**—Display unit, jobbers' catalog sheets.

Wahl Universal Heater

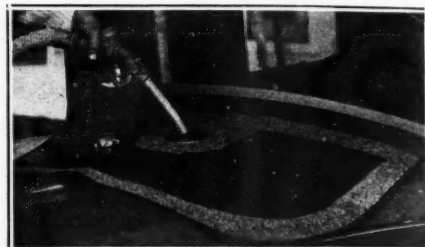
Maker's Description—With the exception of Ford and Chevrolet cars, two models of the Wahl Universal Heater will fit all others. For this reason, it is only necessary to carry a small stock. It is a hot-air heater and the inlet is through a funnel, suspended back of the fan, and the air is forced through between the exhaust pipe and the heater tube, direct to the register of the car. There are no welded, brazed or gasket joints in the entire construction so gas fumes cannot enter the car. The Wahl is quick-



heating and will not rattle nor transmit engine noises into the interior of the car. **Retail Price**—Ford and Chevrolet \$11.00—other cars, \$15.00 and \$17.50. **Maker**—1800 Roscoe Street, Chicago, Ill. **Selling Help**—Folders, envelope stuffers.

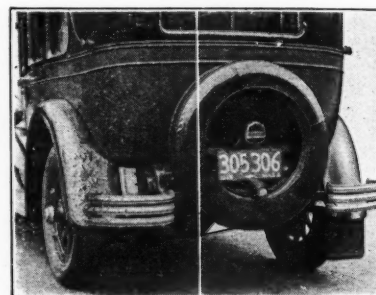
Hinson Ford Cowl Protector

Maker's Description—The Hinson Ford Cowl Protector is made of thick grey felt and rubber coated cloth. The edges are bound with the same material. By its use, gasoline is kept from dripping on the cowl and scratches are prevented. **Retail Price**—\$1.50. Small size for car owner—\$1.00. **Maker**—The Hinson Mfg. Company, Waterloo, Iowa. **Selling Help**—Broad-



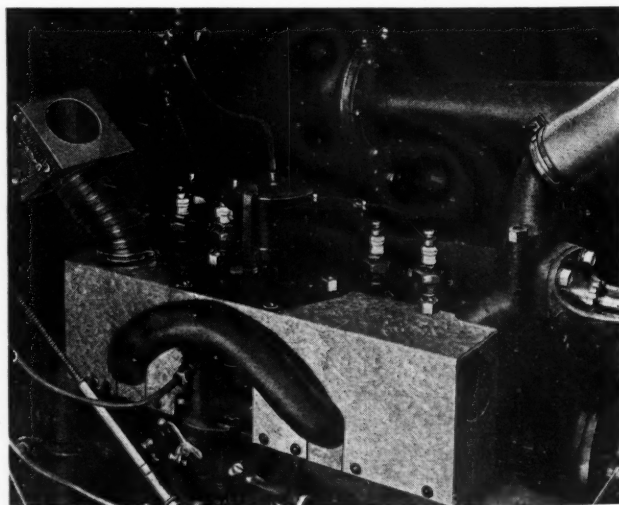
Mud Shields

Maker's Description—"Two Toms" is the name of the new mud shields because they come in pairs and "Tom" meaning tar, oil and mud shields. These two shields hang from the fenders and prevent splash. They are made of artificial leather, doubled, bound and weighted. **Maker**—Hampden Auto Top & Metal Co., Springfield, Mass.



Manifold Heater

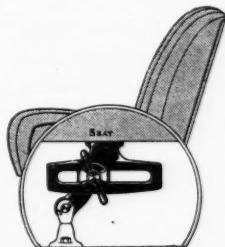
Maker's Description—The major change in this car heater which mounts directly on the manifold is in the conduit and valve from machined steel stove. The valve is controlled by a button and wire from the dash, like a choke. When shut no heat can reach the interior of the car and hence



there is no need of removing the heater in summer time. **Retail Price**—\$5.00 to \$8.00. **Maker**—Stewart-Warner Speedometer Corp., 1826-1852 Diversey Parkway, Chicago, Ill. **Selling Help**—Catalog insert.

Turner Coach Seat Adjuster

Maker's Description—This is a new type of seat adjuster for coaches and two-door sedans which permits the driver or passenger to change the position of seat instantly without getting out of car. It consists of sturdy malleable castings which are attached to the floor brackets with sliding shoe that permits seat to be shifted either forward or backward within a range of 5 in. A rotating arm also permits the driver to tilt the seat backward if desired. Adjustment is made by loosening two large thumb screws at side of seat and pushing seat either forward or backward. It is manufactured in two models, one for the Model "A" Ford two-door sedan and another model for Chevrolet, Oldsmobile, Pontiac, Oakland and Chrysler. **Retail Price**—\$2.00 per set. **Maker**—Turner Mfg. Company, Kokomo, Ind. **Selling Help**—Folders, envelope stuffers.



Utility Universal Heater

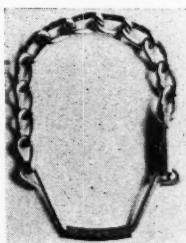
Maker's Description—The Model D Utility Universal Heater fills the marked need for a small but efficient heater that would fit into out-of-the-way corners of any car. Model D measures but 13¼ in. long, 3¼ in. wide and 2 in. high. It is specially made for use in roadsters, cabriolets, coupe-roadsters and all small cars. Because of its size, it can be



placed as a toeboard to the right of a starter pedal or directly in front of clutch and brake pedal. **Retail Price**—\$9.00 with control, valve and tubing. **Maker**—Hill Pump Valve Company, 4600 Schubert Avenue, Chicago, Ill.

Easy-On Chains

Maker's Description—Easy-On Chains for 1929 are finished with a screw adjustment which permits fitting them perfectly to all sizes of tires. These are finished in cadmium plate. A new item is "Handichains." **Retail Price**—"Handichains" sell from 20 cents to 35 cents, depending on size, while the Easy-On tire chain sells from 35 cents to 50 cents, depending on size. **Maker**—Woodworth Specialties Co., Binghamton, N. Y. **Selling Help**—Envelope stuffers.



Monocraft Monograms

Maker's Description—Monocraft initials are interchangeable units fitting snugly into the sockets of all Monocraft crests and are held in place by the same special jeweler's cement which is guaranteed to fasten the complete monograms to the sides of the car. Six beautiful Monocraft styles are all engraved on special Jewelcraft metal, which is bendable by hand to fit any carved car body surface. Each style is furnished in hand-laid enamel and either 22k gold or silver. These engraved metal monograms are sold in pairs, one for each side of the car, and are in various designs to suit the taste of individual owners. Each pair of Monocraft sets is packed in an individual jewelry box with cement and full



directions for attaching. **Retail Price**—\$5.00 per set. **Maker**—Monocraft Products Company, 152 Liberty Avenue, Brooklyn, N. Y. **Selling Help**—Sales cabinet, catalog sheets.

Vernay Vapor Heater

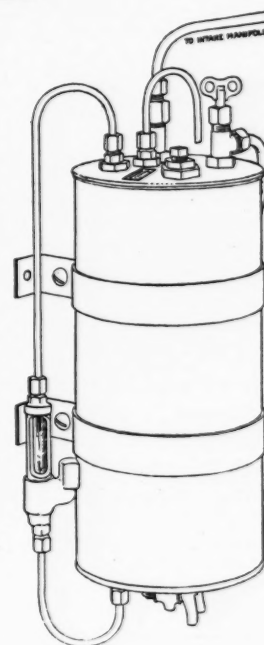
Maker's Description—The Vernay Vapor Heater has been refined in appearance and had its control improved. This heater gets



quickly into action from heat in the muffler. This develops the vapor which rises to the heating unit, thus giving off warmth soon after the engine is started. **Retail Price**—Large size \$22.50; small size \$15.00. **Maker**—Laminated Shim Company, Inc., 200 Forty-fourth Avenue, Long Island City, N. Y. **Selling Help**—Illustrated letter.

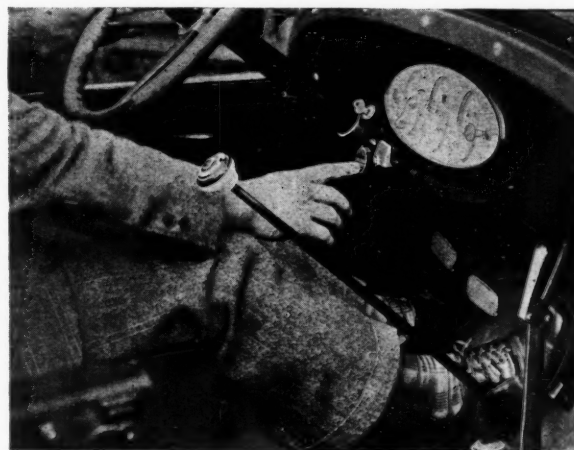
DeWeese Moisture Generator

Maker's Description—The moisture generator supplies moisture to the intake manifold, producing better vaporization, more power, greater mileage, and minimizes carbon deposit. It is entirely automatic and free from moving parts and requires only an occasional supply of water. It is made of heavy polished brass and is provided with adjustable brackets so that it can be attached to any car. **Retail Price**—\$25.00. **Maker**—Walter E. DeWeese, 1332 Addison Road, Cleveland, Ohio. **Selling Help**—Descriptive sheets and folders.



Duotrol

Maker's Description—Duotrol is a combined choke and starter button so arranged that the entire starting process on the Model "A" Ford is handled by this one device. Models



to fit Pontiac, Oakland, Chevrolet, Whippet, Willys-Knight and Durant will soon be on the market. **Retail Price**—\$5.00. **Maker**—Peters & Russell, Inc., Springfield, Ohio. **Selling Help**—Descriptive leaflet.

HOW STOCK IS A STOCK CAR?

(Continued from page 28)

if the gears cannot be examined otherwise. Rear axle ratio is checked against specifications for the model in question.

The rules require that a stock car must carry complete manufacturer's stock equipment as cataloged, advertised and offered for sale. This refers to such parts as fenders, lamps, windshields, bumpers, tire carrier, rear signal, windshield wipers, speedometers, clocks, spare tire and any and all other equipment cataloged as stock. The technical committee therefore makes a check of all such items.

Running-in up to 2500 miles is permitted before a race or trial and tuning up is permitted "as the average owner would do himself."

A critical reader may point out that there is a chance for a manufacturer—if he were so inclined—to substitute parts or make changes during the course of a long distance event. That possibility has not been overlooked. A technical man (or men) is on duty at all times during a run and every bit of work done on a car at a pit stop or on the track is recorded. Any parts removed are retained by the technical man for later comparison, if desired by the technical committee. The running report of the pit technical men is made a part of the record of the event.

The public learns of successful stock car events through advertising and publicity matter and the Contest Board controls all such material sent out by makers. The rules further state that, "All publicity or advertising of the results of stock car trials, tests or competitive races shall state the exact conditions of the performance referred to and the nature of the competition or record established. A complete summary of all options taken advantage of shall be included in

the body of the advertisement or in reasonably readable type in an explanatory paragraph beneath the body of the advertisement. This information shall consist of the optional engine compression ratio used, the optional gear ratio used, the optional tire equipment used, the optional fuel feed used, if any, and type of wheels, if optional wheel equipment is used."

With all of this checking and examining it might be thought that nothing more could be done to insure the stock status of stock cars. But one more thing can be done and since July first of this year it has been done. *That is to pick engines, chassis and bodies at random from the production lines of the factory.* Which means exactly that.

Concerning this random picking Mr. Means says, "The four Studebaker cars recently run at Atlantic City Speedway were picked at the factory by Ralph B. Harlacker and Capt. R. A. Leavell. They visited the motor plant of the company at Detroit and picked four engines from the assembly line, two of them had not yet cooled from their test in the dynamometer room. They then picked four chassis into which these engines were dropped. Both the engines and chassis were secretly marked for future identification. The cars were driven over the road to Amatol, N. J., under supervision of Mr. Harlacker. On arrival they were examined and checked against specifications by Paul Dumas and his committee. During the entire period the cars were at the Speedway they were never out of sight of representatives of the Contest Board.

"If there could be a more rigid and exacting supervision over any event to positively establish the stock status of the cars used I cannot imagine what they could be."

Fifty Salesmen Can't Supply Him

(Continued from page 25)

tires that are still serviceable are used for spares. Every used car sold in the Shelton used car stores has a spare tire, and the spare tire has a tire cover bearing the firm's trademark.

"The result," Beazley said, "is that 50 odd new car salesmen can't trade in enough used cars to meet my demand. I am continually forced to go into the market and buy used cars for my customers. They all go through the same process and emerge as valuable transportation units.

"The cost of conditioning these cars, of course, is added to the price at which they are marketed, but the reconditioning plant of the Shelton company operates at a low cost and the addition to the selling price is more than made up in sales attraction as a result of the improvement in the cars. We can actually sell better used cars cheaper today than we could two years ago, and the used car is no longer considered a necessary evil in this organization. It's distinctly an asset.

"Used cars in the past frequently were set back in some dingy corner and no special plans or methods were used in either reconditioning them or selling them. Now we find that a satisfied used car buyer very often comes back to the firm for a new car.

"This department, therefore, is on just as sound a business basis and is regarded by the firm as having

with the new car division an integral part in building that good will upon which every business must rest if it is successful."

Since the reconditioning plant was established, several large business firms in Dallas have purchased fleets of used cars from the Shelton stores for their traveling salesmen.

Prior to the opening of the reconditioning plant, Ray Shelton, of the Shelton company, set up a special shop for the repair and rejuvenation of used cars. At that time sales were running around 100 a month in five used car stores.

Today, with that idea fully developed, sales are more than 300 a month and only two stores and a lot are necessary to handle the huge volume of business.

The turn-over is very fast.

"The public appreciates the kind of cars the Shelton stores are marketing," Beazley said, "and these cars are sold almost as fast as they are put on the sales floors."

Beazley has been informed that many of the largest Chevrolet dealers in the country have adopted the Dallas plan of handling used cars. Many of the actual sales are to dealers who resell the Shelton used cars and display them to build up the prestige of their used car departments.

A Good Idea

HERE'S an automobile license plate that will be used in Alaska for 1929. We think the idea of smaller and better plates is a mighty worthy one.



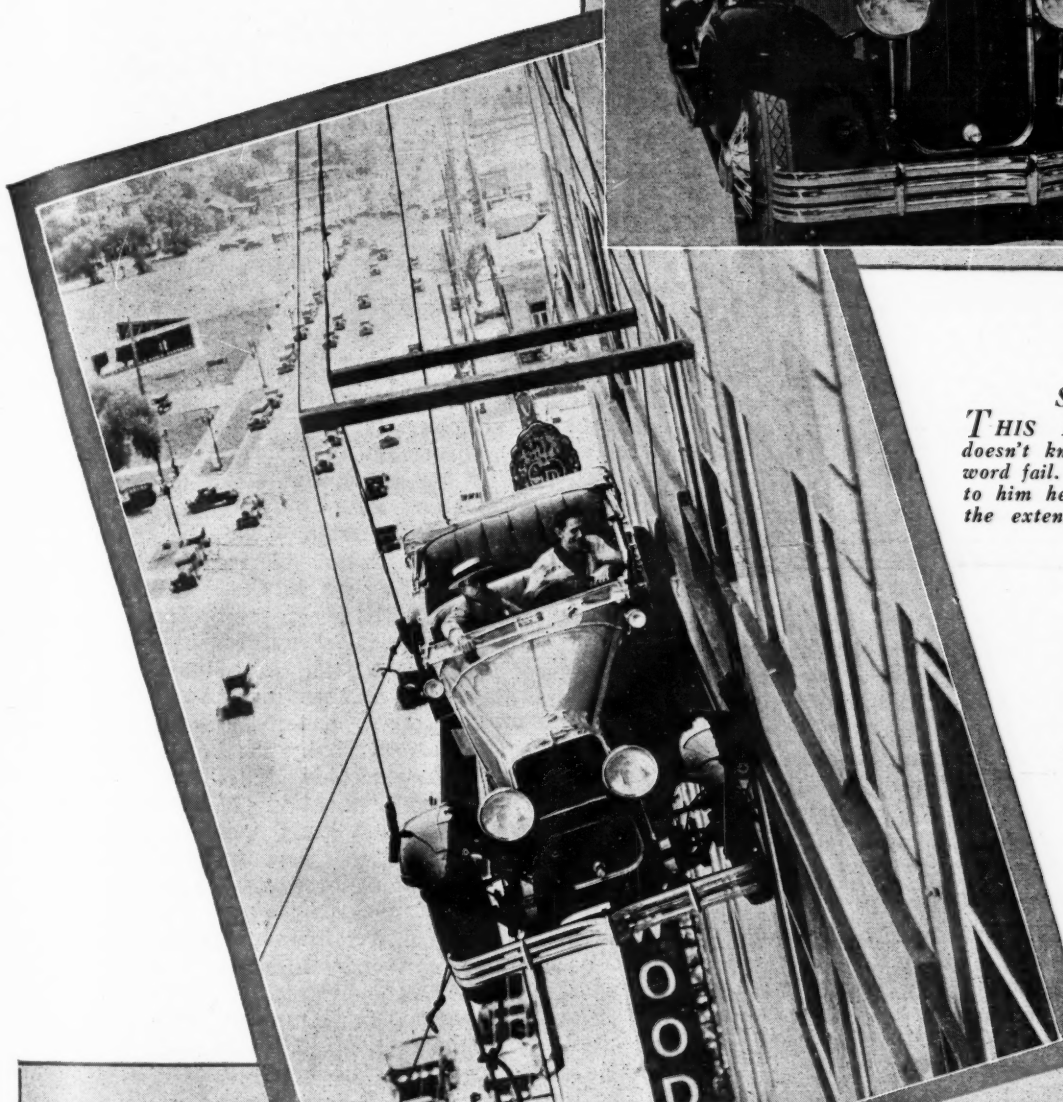
Salesmanship

THIS Los Angeles salesman doesn't know the meaning of the word fail. When they won't come to him he goes to them—even to the extent shown in the picture



Enough for a Year

IVER SCHMIDT, president, Automobile Sales Co., Memphis, buys plenty of cars at once. It saves time. Here he is shown signing a contract for \$1,500,000 worth of Studebakers for a year. At left is R. F. Gloster, manager of Studebaker Memphis branch; and at right, D. J. Willoughby, manager of Southern branches



"SOME SIGNIFICANT TRENDS IN OUR INDUSTRY"

(Continued from page 20)

Because George Washington, the founder of his country, declined to condone the excesses of the French revolution and sought to live at peace with Great Britain, he was called a Royalist and a traitor.

Jefferson was called a demagogue.

The stainless Lincoln was called a foul-mouthed baboon and a shedder of innocent blood.

The greatest Republican and the greatest Democrat of their generations, Theodore Roosevelt and Woodrow Wilson, were both vilified.

Therefore, let us remember that no matter how vigorous and offensive partisan denunciations may become, they mean little. After the election they will subside. There will be shamefaced regrets for what has been said and the new administration will take its place with reasonable good will from persons of all politics. It has always been so.

So is it with issues. Issues come and go. They have their day and they pass.

In the early 90's we dealt with populism.

In the late 90's we battled the subject of free silver.

In the first decade of the century, we were told that because we took the Philippines, we had become imperialistic. Then the pacifists had their day.

In the consideration of all these issues, the sound common sense of the country finally asserts itself. It discards the heresies and adopts into our system only those propositions which are fundamentally sound.

Do not forget that you have your investment in the stablest country in the world. No political uproar can change that.

The United States, while known as a young nation, is actually old in experience and stability. We have had our kind of institutions unchanged longer than any nation in the world save one, Great Britain.

Since we came into being, virtually all of the other countries have had their kind of government changed either by conquest from without or revolt from within.

Five Reasons for Stability

There are five outstanding reasons for our stability and it takes but a minute to tell them.

First, our great natural resources, the three thousand miles of continent stretching from ocean to ocean and containing within its boundaries virtually everything essential to national life.

Second, the genius of our political institutions, affording, as they do, an opportunity to all.

Third, the democracy of our educational system which gives the son of the poor man equal chance with the son of the rich man.

Fourth, the place which we give to our great asset, the womanhood of our country.

Fifth, the genius of quantity production which brings within the reach of all, at low price, every great advance of science, every discovery and invention.

No matter what happens in the forthcoming election, the country will go right on.

Both parties have named their strongest man. We do not know which will win, but it will be either the son of a poor blacksmith from West Branch, Iowa, or the son of a poor truckman on the East Side of New York.

It seems to me pretty good Americanism that the foremost executive place within the appointment of man is to be contended for by men whose beginnings were so humble. Neither will trifle with business. Mr. Hoover, an engineer of world-wide experience, has had his whole training in business.

Mr. Smith, born in the country's financial center, has been a sound administrator of the affairs of the great state of New York.

Therefore, I cannot but feel that with our resources, business will go forward, regardless of what may be the verdict.

Importance of Business

Business should go forward. It is vital to our country. Never let yourself be talked out of your pride in being a business man.

I often think we make a mistake in speaking of business too much in terms of profit and loss, of assets and liabilities. What we know as business is more than that. It is inseparable from every phase of human existence. It soars to the mountain top of every hope and it plumbs the depths of every despair. The hope of material reward guides the brush of the artist and spurs the brain of the writer.

Business is the force that replaces one blade of grass with two, or three, or ten thousand. It paints the red of health into the baby cheek. It is upon the fruits of business, equitably distributed in wages, that we depend for the education of our children, and who shall say how many an Edison or a Steinmetz may not have been lost to the country when a time of industrial depression dried the courses of prosperity.

The permanency of our country depends on business, because we can only finance our national defenses through our prosperity.

Business even deals in miracles, for it permits a man to stretch back a protecting hand over his loved ones, even from the grave itself.

To serve a force so beneficent and all prevailing is a dedication worth while. Therefore, each man to his task and this be our slogan.

The man who strikes a blow at legitimate business is an enemy of the people, whether he talk from a soap box on a street corner, or from the highest halls of legislation; but the man who sincerely and honestly strives for the upbuilding of legitimate business and the equitable distribution of its fruits, performs the best service of practical patriotism that one citizen can render to another.

In Next Week's Issue

TWO stories you shouldn't miss: One tells how a western dealer increased his business 30 per cent by means of a "shop organ"; the other describes an unusual car washer installation that is boosting profits for a St. Louis firm. Watch for them.

Answers to Legal Queries

By S. BOYER DAVIS

If You Are Summoned

I got a letter through the mail that they call a summons, telling me I have broken the automobile law and telling me to come to the office of the justice of the peace at a certain time. Now I would like to know what this is and do I have to go?—Rufus Schneider, Schwenksville, Pa.

WE have been asked a number of times recently as to just what the legal significance is of the summons or notice sent by the judge of a police court or a magistrate in many jurisdictions to motorists who have been charged with infraction of the automobile laws which do not involve criminality.

The answer is that in most instances the said notices are simply an advice to the person addressed that a charge has been laid against him or her. It is sometimes so stated but in others it is to be understood that a warrant has been or will be issued and that the defendant will be arrested and brought before the police judge or magistrate issuing the warrant if he does not come voluntarily at the time set by the notice on the day appointed.

The custom has grown up because of the unwillingness of such courts to summarily arrest persons who are charged with violations of a law, which, while it is technically a criminal one, its infractions do not necessarily or as a rule involve real criminality. Also, such persons can readily be found, as a general rule, due to the fact that the registration number of the motor vehicle gives the clue to the owner's name and residence.

It is wiser, we need scarcely add, to comply with the directions in such communications and not to stand upon the order of going but to go at once. It saves trouble.

Refunding Deposit

A short time ago I placed an order for a new Ford as you will note by the enclosed photostat. This order was placed with a dealer from whom one of the men at the office had purchased several Fords. He was perfectly satisfied with the treatment received from said dealer. Upon the strength of this and the early delivery promised (orally) by the dealer, I placed an order for a Tudor sedan. The order was placed during the lunch hour and I did not take time to read the contract thoroughly, taking it for granted that Ford policy was the same at all dealers regarding refunds on cancelled orders.

The time promised when the contract was signed was sixty days (on oral promise). I just recently learned that it will not be possible for me to receive the car for several months. As this is too late for my vaca-

tion I desired to cancel the order. The dealer says he will not refund the deposit because it is not specified on the order.

Is this Ford's policy? Can you suggest how to recover this deposit money?—Wm. P. Borge, 1513 N. Long Ave., Chicago, Ill.

TO recover the deposit you have paid down on the car ordered, you would have to bring suit against the dealer with whom you made the agreement.

In most instances the courts are not very strict about the matter of time in cases of contract, and where there is no undue delay and the contract is completed within a reasonable time, it is held to be a compliance with the terms of the agreement. Matters of this kind, i. e., the return of deposits, most motor companies leave to the discretion of their agents.

Which Light is Left?

I was recently called down by a traffic policeman because I pulled over to the side of the road and waited for the yellow light to turn to the left on a cross road. Is there any way of telling when and how you can make a left turn without asking a policeman if there is one there, or getting "bawled" out if you make a mistake?—Frederick Mulhall, Cazenovia, N. Y.

YOUR letter brings out a very unsatisfactory state of affairs. In a few states the traffic rules apply all over the state and are uniform. This is ideal, of course, as far as it goes. That is, as far as that state is concerned. But in the very next state you may find, and probably will, that every local authority, towns, villages and cities have their own set of regulations which are drafted to suit local conditions and according to local ideas as to such matters.

The American Automobile Association has, we believe, drafted an automobile law which has been adopted in some states and which contains uniform traffic regulations. This is worthy of your support and of that of all other motorists, as in the whole movement to secure uniform laws. In this way a citizen of one state can know his rights and duties in other states and confusion be avoided.

To answer your question definitely you must either secure a copy of the law of any state you intend to enter in your car and if local regulations are permitted, ascertain beforehand what they are or take your chances of guessing right and avoiding a call-down.

Who Is Responsible?

I own a small delivery truck to make deliveries in my business and employ a driver to run it. The other night this man took the car out at night for a joy ride and had an accident. It was a collision and he hurt the driver of the other machine; and damaged the other car as well as mine. The insurance agent says that my policy covers the injury to the driver of the other car but not the damage to the machine itself. My policy is a liability policy and I thought it protected me from any suit by anyone else against me. I would like to have you tell me what you think about this.—Harry B. Judkins, Pittsburgh, Pa.

A LIABILITY policy on an automobile protects the owner of the car in cases of personal injury. That is, injury to people or death. The usual limits, we believe, are up to \$5,000 for the injury or death of one person and \$10,000 for two or more. This means that the insurance company defends any suit brought against the insured for personal injuries to another and if the case is lost, pays the amount of the verdict within the limits named above. Anything more the insured must pay.

Of course, by paying a higher premium, a policy can be secured which will take care of the owner of the car should larger damages be assessed against him. However, damage to another's automobile, clothing or property of any kind is not insured against in such a policy unless it contains a damage to property clause. Evidently your policy did not contain this clause for which, of course, an increased premium is charged.

Repossessing by Finance Co.

I operate a public parking garage and would like to know my legal rights as to delivery to finance companies cars parked with me for unpaid bills. Should I not be served by an officer of the law for them to get possession of the car? What is my position in this matter?—S. S. Curtis & Son, Hammond, Ind.

IT would undoubtedly seem that you could force the finance company in such cases to take out a writ of replevin. If, however, they are really the owners of the car this would not do you much good.

Where the purchaser has failed to pay the instalments the agreement on which cars are sold on instalment are always so drawn as to give the finance company the right to repossess the car and so you would be compelled to give the car up. If so, there would be no advantage in forcing them to take legal action and probably incurring some expense to yourself.

pete keen 7.78



A MOTOR AGE IMPRESSION = M.C. HUTTO
President = Hutto Engineering Co., Inc.

SERVICE PARTS



Allbestos Brake Lining

Maker's Description—This new type of brake lining embodies a new idea in its manufacture and impregnation. It is designed to give long life in heavy duty service, such as is found on trucks and buses. It is practically impervious to water, oils and grease. No short fibred asbestos



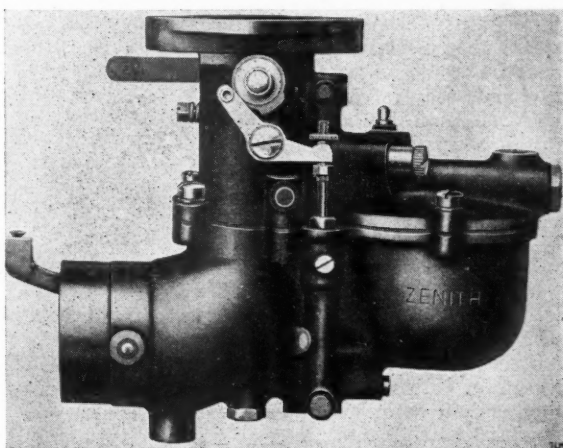
is used in its manufacture and it is woven very compactly on heavy looms with an interlocking weave of three or more plies. The chemical treatment used is only to give this new type lining a wear factor to enable it to withstand the arduous service demanded in heavy duty work. **Maker**—Allbestos Corporation, Philadelphia, Pa. **Selling Help**—Flat rate charts, specifications books, folders.

New Fostoria Product

Maker's Description—This line has been augmented by running board splashers and tire wells. These wells come in two sizes and are known as Model "A" and "B." Running board splashers are produced as replacement for a number of cars. **Retail Price**—The tire wells range from \$3.00 to \$4.20, depending on size and whether or not they are enameled. The running board splashers list between \$3.50 and \$7.00, depending on the car and model. **Maker**—The Fostoria Pressed Steel Co., Fostoria, Ohio. **Selling Help**—Envelope stuffers.

Zenith Series 110 Carburetor

Maker's Description—The new 110 series Zenith Carburetor meets every demand of modern driving conditions. The rapid acceleration is due to the fully developed accelerating system; the efficient accelerating pump, the well carrying a

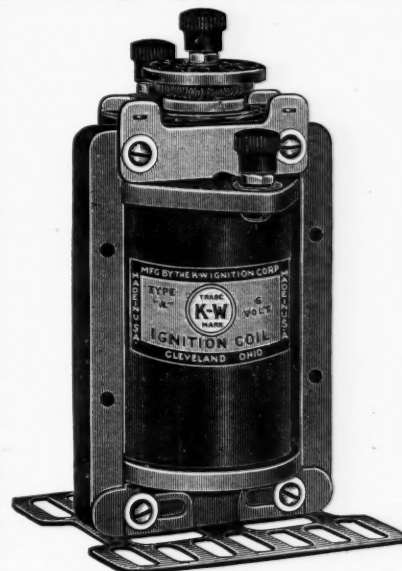


follow-up fuel supply, and the power jet. Speed demands are fully met by the air capacity of the new model and the power jet, supplying the necessary fuel and air mixture

strength. The accelerating system supplies a strong mixture for quick throttle and the power jet supplies a strong mixture for wide open throttle, making possible the use of a thinner and very economical mixture for ordinary driving conditions. Smooth idling is obtained by means of a slotted idling hole and easy and quick starting is obtained by a special starting device. Zenith replacement units are now ready for Chevrolet, Pontiac, Star, Essex, Oldsmobile, Overland-Whippet, Buick, Studebaker, Chrysler, Graham-Paige. **Maker**—Zenith-Detroit Corporation, Detroit, Mich.

K-W Ignition Coil

Maker's Description—The Type "A" K-W Coil is a double magnetic circuit transformer type of a highly efficient design and gives not only the voltage required to jump a wide gap, but the heat of spark that sets off the mixture rapidly. It is built particularly for the present-day type of motor, and the windings are hermetically sealed and incased in Bakelite, making it moisture proof. When using the Type "A" Coil the distance between the spark plug points should be approximately .040 in. or about twice that when the average coil is used. **Retail Price**—\$7.50. **Maker**—The K-W Ignition Corporation, 2811 Chester Avenue, Cleveland, Ohio. **Selling Help**—Folders, envelope stuffers.

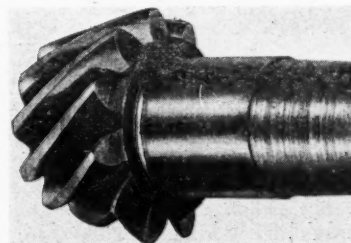


Black Seal Brake and Gasket Cement

Maker's Description—This is a compound especially for sealing gaskets, stopping squeaks and preventing brakes from slipping, also for the elimination of corrosion on Battery terminal. **Retail Price**—50c per tube, pint cans \$1.00. **Maker**—Steelcote Mfg. Company, St. Louis, Mo. **Selling Help**—Loose leaf catalog page.

Double Diamond Gears

Maker's Description—All Double Diamond drive gears and pinions are now made with three and one-half per cent nickel steel. In addition the gears are now burrished to remove every trace of tool marks and all pinions and drive gears are matched on Gleason testing machines. **Maker**—Automotive Gear Works, Inc., Richmond, Ind.



Rusco Brake Lining

Maker's Description—Rusco lining is now available cut and drilled to fit the new Chevrolet. These linings are put up in complete sets, neatly boxed and including all necessary rivets for attaching. A similar set is also provided for the



Model "A" Ford. **Retail Price**—\$7.50. **Maker**—Russell Mfg. Company, Middletown, Conn. **Selling Help**—Complete catalog.

McQuay-Norris Line

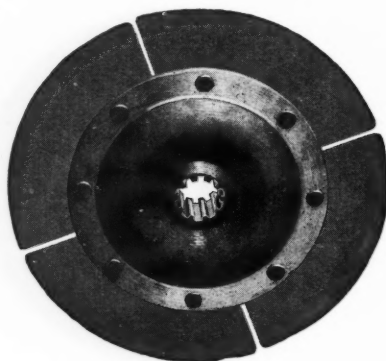
Maker's Description—A complete line of kingpin or steering knuckle bolts, tie rod bolts, spring shackle bolts and bushings to fit these bolts is now offered by this company. **Retail Price**—Complete price lists are furnished by the manufacturer. **Maker**—McQuay-Norris Mfg. Company, St. Louis, Mo. **Selling Help**—Catalog showing complete line.

Burgess-Norton Piston Pins

Maker's Description—A new steel which greatly increases the quality and wear has been adopted for use in the Perfectlap Piston Pins. A new standard package has also been adopted for packing these pins, the ends of which are clearly marked with the B-N trademark and the number and size of the pin. **Maker**—Burgess-Norton Mfg. Company, Geneva, Ill. **Selling Help**—Instruction charts, folders, catalogs.

Universal Replacement Clutch Plates

Maker's Description—Extreme care is exercised in the manufacture of Universal Clutch Plates for replacement on



every type of passenger car, taxicab, bus and truck, to maintain accurate splines, teeth and spiders. Plates which are faced are equipped with unusually long-life facing material. **Maker**—Universal C a p Mfg Co., 10402 St. Clair Ave. N. E., Cleveland, Ohio. **Selling Help**—Folders, catalog inserts.

G. H. Brake Spring Assortment

Maker's Description—Brake spring assortment No. 1 includes 270 brake springs including six each for Buick, Cadillac, Chandler, Dodge, Hudson, Essex, Chrysler, Oakland, Oldsmobile, Overland and Studebaker. The assortment is contained in an all-steel cabinet containing two partitioned trays and is 5 in. high, 17½ in. wide and 13½ in. deep. The No. 2 brake spring assortment contains 366 brake springs which contain six each for all the popular makes of cars. This assortment is contained in an all-steel cabinet 8½ in.

high, 12½ in. wide and 15½ in. deep, containing an upper tray and two lower drawers. **Retail Price**—No. 1 assortment \$28.50; No. 2 assortment \$60.00. **Maker**—The G. H. Mfg. Company, 8-10 E. Mt. Royal Ave., Baltimore, Md. **Selling Help**—Folders, envelope stuffers.

King Piston Rings

Maker's Description—King piston rings are supplied in both compression and ventilated oil type. They are available in all sizes of width from the smallest up to 12 in. in diameter and 1 in. wide. **Retail Price**—Compression rings up to and including 4 in. in diameter 25c. Ventilating oil rings up to 4 15/16 in. in diameter 50c. **Maker**—King Quality Products, Inc., Indianapolis, Ind. **Selling Help**—Unit packages for popular cars, folders describing packages, jobbers' catalog pages, complete catalog.

Goerlich Universal Muffler

Maker's Description—This muffler is universal in its adaptation to automobiles as but two models are required to cover the entire field. Model "1" is adapted to all cars from Ford to the cars in the Chrysler "80" class. The exhaust chamber diameter is 4 inches and its length 47½ inches



with tail pipe. The model "2" is designed for the larger cars and while of the same diameter is 59 inches in length. Reduced back pressure, faster acceleration, increased mileage and greater power, together with silent operation, are the claims made for this muffler. **Retail Price**—\$6.75 for Model "1" and \$9.75 for Model "2." **Maker**—Goerlich's, Toledo, Ohio. **Selling Help**—Envelope stuffers, jobbers' catalog sheets, illustrated letters, metal display stand and window posters.

Champion Spark Plugs

Maker's Description—Three new Champion spark plugs, the Aero No. 9, Truck Special and No. 8 are now available. The Champion Aero type spark plugs are so designed that they positively cannot be broken in such a way as to interfere with engine operation and failure to fire is practically an impossibility. Their ability to withstand tremendous pressures and temperatures is combined with the ability to withstand a maximum amount of oil. Sillimanite is used in both the primary insulator and protecting dome insulator. Although the new Aero line is a departure from the standard design, it still retains the essential features of the Champion two-piece construction.

The Champion Sillimanite core is also used on the Truck and the new Champion No. 8 spark plug. The core is improved in both process and design, increasing to a marked degree the mechanical strength, ability to stand high temperature, and the shock and high heat conductivity. The gasket construction has also been changed to remain uniform under severe conditions. Another important feature is the design of firing chamber in each type of spark plug in order to give it much wider service range from the standpoint of heat and fouling. The electrode wires resist burning and pitting and the new parallel type gap setting insures a uniform gap. **Retail Price**—Aero type \$2.00; racing type \$1.50; standard type 75c. **Maker**—Champion Spark Plug Company, Toledo, Ohio. **Selling Help**—Folders, display boards, envelope stuffers.

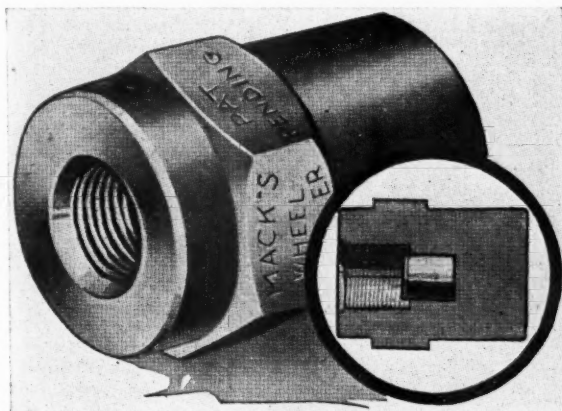


SMALL TOOLS



Mack Wheel Puller

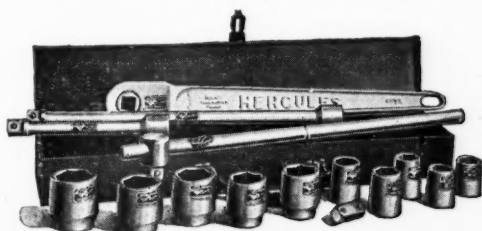
Maker's Description—These pullers are made to fit practically all cars and are available either in sets or singly. **Retail Price**—Set No. 12 includes five pullers and sells for \$8.50. Set No. 11 which includes three pullers sells for



\$4.00. Individual pullers sell from \$1.00 to \$3.00 depending on size. **Maker**—Allen Electric & Equipment Co., Kalamazoo, Mich. **Selling Help**—Jobbers' catalog page.

Bonney Hercules Socket

Maker's Description—The set is composed of ten sockets running in size from 15/16 in. to 1 1/8 in. opening. It is especially designed for extremely hard service. A ratchet



handle and a short and long extension sliding "T" handle packed in substantial black enameled carrying case completes the set. **Retail Price**—\$34.00. **Maker**—Bonney Forge & Tool Works, Allentown, Penna.

Griffith Ham'r-Rench

Maker's Description—This is a complete tire-change tool combining an extra strong all-steel hammer for loosening

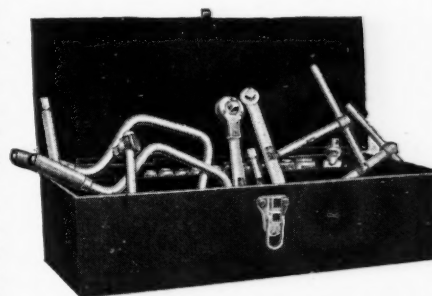


rusty rim bolts and an improved socket wrench which will remove nuts quickly and put them back to stay. In addition to acting as a hammer and wrench, the tool is designed

to function as a tire iron and will pry off tire rims. As the handle is graduated, it is also used as a gasoline gage. Made in two sizes, No. 1 designed for 3/4 in. rim bolts, weight 2 lbs., length 13 1/2 in. overall, and No. 2 which is the same as No. 1 except that the hammer head is made with stem post for mounting interchangeable socket wrench caps. It is equipped with 13/16 in. as well as 3/4 in. sockets. **Retail Price**—No. 1—\$1.25. No. 2—\$1.50. **Maker**—Griffith Tool Works, 529 Commerce St., Philadelphia, Pa. **Selling Help**—Display board, descriptive booklet.

Bonney Wrench Development

Maker's Description—A new type metal case 20 in. long, 8 in. wide and 5 in. deep has been developed for the No. R assortment of Bonney 'C-V' Chrome Vanadium Socket Wrenches. The purpose of this case is to provide space for additional wrenches and tools.



Another development is the Chrome Vanadium Wrench for Chevrolet main bearings. This is known as No. 2540.

Ten ignition wrenches, known as Ignition Set No. 18, have also been added to the line. These are made from chrome vanadium steel, heat-treated and guaranteed. The wrenches are suitable for use on ignition work on the most popular electrical system. **Retail Prices**—The price of the No. R.



socket assortment in larger box is unchanged, being \$27.50. The No. 2540 Chevrolet main bearing wrench sells for \$2.50. The ignition set in leatherette roll sells for \$5.50. **Maker**—Bonney Forge & Tool Works, Allentown, Penna.

Sioux Expanding Pilot Stems

Maker's Description—Each Sioux Expanding Pilot Stem consists of two parts: No. 1, the expanding stem itself, and No. 2, a shank which fits snugly over the top of the stem and holds the reamer or cutter. The stem has three slots at the bottom end to provide for expansion. A tapered core runs through the center of the stem. The core is threaded at the bottom end to screw into the slotted end of the stem which is also threaded on the inside. This core also has a hexagon nut at the top so that a wrench can be used in screwing the core down tightly into the expanding end of the stem. The shank has a hole in the center which fits over the pilot stem. This hole is precision ground to close limits to prevent any possibility of play. In operation the pilot itself does not rotate in the valve stem guide but is held rigidly in place. The reamer or cutter is placed on the shank which rotates on the pilot stem. Thus the valve seat is refaced exactly at right angle to the valve guide hole. Manufactured in four sizes, 5/16, 11/32, 3/8 and 7/16 in. **Maker**—Albertson & Company, Sioux City, Iowa.

A . E . A . SHOW — HIGH SPOTS

(Continued from page 17)



Officers of the A.E.A.

- A. C. Storz, Storz-Western Auto Supply Co., Omaha, President.
 W. C. Hecker, Curtis Pneumatic Machinery Co., St. Louis, Vice-President.
 Commissioner B. W. Ruark, Assistant Secretary and Treasurer.

Board of Directors

- G. W. Fleming, Fleming Machine Co., Worcester, Mass.
 R. W. Shreiner, General Automotive Supply Co., Harrisburg, Pa.
 A. T. Clifton, Clifton Mfg. Co., Waco, Texas.
 F. H. Suter, Shadbolt & Boyd Co., Milwaukee.
 Chas. C. Gates, Gates Rubber Co., Denver.
 H. D. Howard, Massey Hardware Co., Wichita.
 A. J. Hayes, Champion Spark Plug Co. of Canada, Windsor, Ont.
 F. J. Tenk, Tenk Hardware Co., Quincy, Ill.
 R. S. Harvey, Rees Mfg. Co., Pittsburgh.
 E. N. Tarbell, Tarbell Watters Co., Inc., Springfield, Mass.
 W. S. Isherwood, AC Spark Plug Co., Flint, Mich.
 E. R. Seager, Pennsylvania Rubber & Supply Co., Cleveland.
 H. F. Kingsley, Kingsley-Miller Co., Chicago.
 Tom Glasgow, Glasgow-Stewart Co., Charlotte, N. C.
 F. M. Durham, Bonney Forge & Tool Works, Allentown, Pa.
 C. F. Wright, Ballou & Wright, Portland, Oregon.
 H. J. Lange, Marquette Mfg. Co., Inc., St. Paul.
 L. M. White, Mackenzie, White & Dunsmuir, Ltd., Vancouver, B. C.
 Geo. L. Brunner, Brunner Mfg. Co., Utica, N. Y.
 E. T. Satchell, Motor Accessories Co., Allentown, Pa.
 N. H. Boynton, National Lamp Works of General Electric Co., Cleveland.
 R. E. Simpson, Ferris-Simpson Co., Dallas.
 C. C. Secrist, Victor Mfg. & Gasket Co., Chicago.
 Wm. F. Beckley, Michigan Auto Supply Co., Detroit.
 E. L. Foos, Parker & Waterman Mfg. Co., Los Angeles;
 G. H. Niekamp, Beck & Corbitt Co., St. Louis.

branch of the General Auto Supply Co.

Wednesday evening will be featured by the banquet of the Overseas Club. Thursday has been set aside as an open day in convention agenda, and it is now planned to hold no sessions, thus allowing a full day's attendance at the show. Thursday evening, the gala affair of the week, "Night on Mars," will be presented in the grand ballroom and the north and south ballroom of the Stevens Hotel. The program will start at 9 p. m. and last until 2 a. m., while a band and two orchestras in addition to a stage show will supply the entertainment. The final session of the convention will be held either Friday or Saturday.

In connection with the exhibit, the Mechanical Service Department, complete in every detail, has been based on the best methods developed by several members who have been successfully operating such departments. This model is being set up because of the repeated re-

quest through the Association from wholesalers and service parts dealers throughout the United States and Canada. The model will show the accepted standard machine shop that should be used as an auxiliary to the parts business.

W. S. Isherwood, chairman of the committee in charge of arrangements, has been assisted by E. R. Seager, F. H. Suter, C. C. Secrist and George L. Brunner in working out the details of the show.

The following is a list of the exhibitors:

| | Space |
|--|--------------|
| A & G Publishing Corp., The, New York, N. Y. | 121 |
| AC Spark Plug Co., Flint, Mich. | 181-182 |
| Acme White Lead & Color Works, Detroit, Mich. | 114-115 |
| Ajax Auto Parts Co., Racine, Wis. | 354 |
| Albertson & Co., Sioux City, Iowa | 56-59 inc. |
| Allbestos Corp., Philadelphia, Pa. | 116 |
| Allen Electric & Equipment Co., Kalamazoo, Mich. | 227-228 |
| American Bosch Magneto Co., Springfield, Mass. | 359-360-361 |
| American Chain Co., Bridgeport, Conn. | 3-7 inc. |
| American Hammered Piston Ring Co., Baltimore, Md. | 622-623 |
| American Automatic Devices Co., Chicago, Ill. | 128 |
| Apex Electric Mfg. Co., Chicago, Ill. | 210 |
| Apco-Mossberg Corp., Attleboro, Mass. | 162-163 |
| Au-To Compressor Co., Wilmington, Ohio | 17-18-19 |
| Auto Specialties Mfg. Co., St. Joseph, Mich. | 609-610-611 |
| Automotive Daily News Publishing Co., New York, N. Y. | 328-329 |
| Automobile Digest, Cincinnati, Ohio | 112 |
| Automotive Maintenance Machinery Co., Chicago, Ill. | 369-370 |
| Automotive Merchandising & Automotive Wholesaling, New York, N. Y. | 324-325-326 |
| Automotizing South Publishing Co., Nashville, Tenn. | 117 |
| Bastian-Blessing Co., Chicago, Ill. | 637-638 |
| Badger Rubber Works, Cudahy, Wis. | 126-127 |
| Berger Mfg. Co., Canton, Ohio | 72-73 |
| Biflex Products Co., Waukegan, Ill. | 294-295 |
| Binks Spray Equipment Co., Chicago, Ill. | 297-298 |
| Black & Decker Mfg. Co., Towson, Md. | 93-98 inc. |
| Blackhawk Mfg. Co., Milwaukee, Wis. | 281-284 inc. |
| Bonney Forge & Tool Works, Allentown, Pa. | 278-279-280 |
| Brunner Mfg. Co., Utica, N. Y. | 243-248 inc. |
| Burgess Battery Co., Chicago, Ill. | 133-134-135 |
| Burgess-Norton Mfg. Co., Geneva, Ill. | 254 |
| Burton & Rogers Mfg. Co., Boston, Mass. | 20-21-22 |
| Business Publishers International Corp., New York, N. Y. | 129 |
| Bussmann Mfg. Co., St. Louis, Mo. | 258 |
| Canedy-Otto Mfg. Co., Chicago Heights, Ill. | 314-315 |
| Carborundum Co., Niagara Falls, N. Y. | 273-274 |
| Casco Products Corp., Bridgeport, Conn. | 166-167 |
| Champion Spark Plug Co., Toledo, Ohio | 190-191 |
| Chilton Class Journal Co., Philadelphia, Pa. | 106-107 |
| Clifton Manufacturing Co., Waco, Texas | 355 |
| Columbus McKinnon Chain Co., Tonawanda, N. Y. | 332-333-334 |
| Columbus Varnish Co., Columbus, Ohio | 353 |
| Columbian Vise & Mfg. Co., Cleveland, Ohio | 108 |
| Continental Rubber Works, Erie, Pa. | 229 |
| Cooper Mfg. Co., Marshalltown, Iowa | 196 |
| Crawford Mfg. Co., The, Richmond, Va. | 624-625 |
| Cuno Engineering Corp., Meriden, Conn. | 289 |
| Curtis Pneumatic Machinery Co., St. Louis, Mo. | 362-363 inc. |
| Delta Electric Co., Marion, Ind. | 219 |
| DeVilbiss Co., Toledo, Ohio | 205-206 |
| Dover Stamping & Mfg. Co., Cambridge, Mass. | 218 |
| DuPont DeNemours Co., E. I., Detroit, Mich. | 176-177 |
| Durkee-Atwood Co., Minneapolis, Minn. | 264 |
| E. A. Laboratories, Inc., Brooklyn, N. Y. | 65-66-67 |
| E. Edelman & Co., Chicago, Ill. | 626-627 |
| Edison Lamp Works of Gen. Electric Co., Harrison, N. J. | 287-288 |
| Elite Mfg. Co., The, Ashland, Ohio | 613-614 |
| Farran-Old Co., The, Akron, Ohio | 296 |
| Federal-Mogul Corp., Detroit, Mich. | 322 |
| Ferguson Publishing Co., New York, N. Y. | 123 |
| Fitzgerald Mfg. Co., Torrington, Conn. | 302-303 |
| Fleming Machine Co., Worcester, Mass. | 81-82 |

(Continued on page 42)

READERS' CLEARING HOUSE

Questions Answered By C. Edward Packer

Loss of Speed

What speed should a Dodge truck using the regular Victory Six engine make? The owner tells me that he used to get 55 miles an hour from the truck until recently. Now it will only do 45. The valves have been ground and are in good shape. The truck really performs perfectly up to 45 miles an hour, but will not do any more. If you try to go faster it will slow up and just seems to weaken as though the gas were shut off. When it gets down to 40 it will pick right up to 45 at once. We cleaned the gas tank, gas line and vacuum tank, and have taken the carburetor off and cleaned it. We dressed and adjusted the breaker points. We can get more speed with .010 in. point setting than with the regular setting. Don't you think I am right in assuming that the points are at fault? We have also checked the ignition timing, but it makes no difference. This truck has been driven 10,000. Do you think the timing chain has jumped, or what could the trouble be? We adjusted the valve tappets .006 on the intake and .008 on the exhaust. What is the correct setting of the points and tappets on this engine and what is the valve timing?—E. M. Peek, P. O. Box 199, Trilby, Florida.

WE do not believe that you would be able to get 45 miles an hour out of this truck if the chain actually had jumped. It might be worth your while to check up on this, however, which you can do quite readily. First,

set your tappets with the engine cold, so that they have an exact clearance of .005 in. Then, bring any piston to top dead center of the exhaust stroke. At this point the exhaust valve should be just closed and on the slightest movement of the crank the intake valve should just begin to open. It might be well to check the igniter for play in the camshaft, as a wobbling camshaft would cause erratic breaker action. The breaker points should be set with a clearance of .020 in. and the spark plugs set with a gap of .030 in. If your compression is good and the timing correct as given, this should perform as it did formerly, unless you have a weak coil which might be failing at high speed. Your better performance at high speed indicates that the coil may be weak. It proves nothing about the points.

What is the Tap?

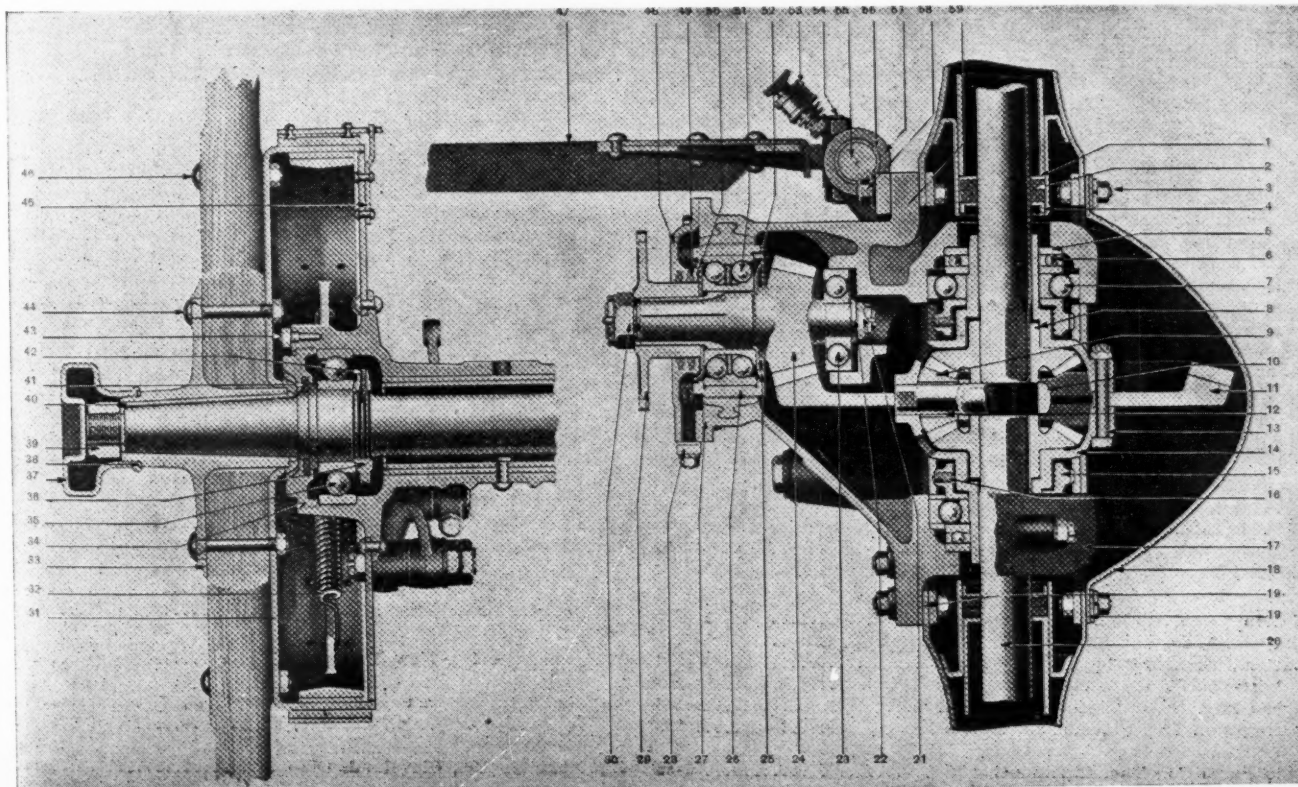
In a 1927 model Pontiac I have a tapping noise that sounds like a valve tappet in the engine when it is idling. I have not been able to locate it. I put in wrist pins, but this doesn't help. What would you advise me to do in this case?—Oscar Christenson, P. O. Box No. 191, Stanley, Wis.

OF course, if in reaming the bushing for the wrist pin if high spot develops, the pin might feel as though it were a good fit, but actually develop excessive clearance rapidly. If you can short out the cylinder that has this tap in it, it will give you a double tapping sound instead of a single tap, if it actually is caused by the wrist pin. Another possibility is that your rod is sprung and is slapping from side to side. We would suggest that you take this part out and place it on your connecting rod aligning jig just to be sure.

Packard Rear Axle

Can you give me a little information on a 1919 Packard Twin Six? How are the ball bearings on the shaft on which the large ring gear is carried assembled? I note that there are two large ball bearings and two small thrust bearings. Can you explain to me how this assembly should be put up and bolted in the housing?—Keith N. T. Murray, 9 Merion Hall, Haverford, Pa.

A CHINESE proverb tells us that one picture is worth a thousand words, so we are giving you the message in one picture. With your parts before you and carefully studying the diagram, we believe you will have no difficulty in making the assembly.



EXHIBITORS AT AUTOMOTIVE EQUIPMENT SHOW

(Continued from page 40)

| | Space | | Space |
|---|-----------------------|---|--------------|
| Flower City Specialty Co., Rochester, N. Y. | 198 | Packard Electric Co., Warren, Ohio | 349-350-351 |
| Fram-Slaymaker Hardware Co., Lancaster, Pa. | 235-236 | Parker Co., Charles, Meriden, Conn. | 74 |
| Francisco Auto Heater Co., Columbus, Ohio | 361½ | Perfect Circle Co., The, Hagerstown, Ind. | 224-225-226 |
| French Battery Co., Chicago, Ill. | 316 | Perfection Gear Co., Chicago, Ill. | 164-165 |
| Fulton Co., The, Milwaukee, Wis. | 195 | Permatex Co., Inc., Sheepshead Bay, N. Y. | 337-338 |
| Gates Rubber Co., Denver, Colo. | 216-217 | Phinney-Walker Co., Inc., New York, N. Y. | 122 |
| General Asbestos & Rubber Co., North Charleston, N. C. | 641 | Piston Ring Co., The, Muskegon, Mich. | 193-194 |
| Gilfillan Brothers, Inc., Los Angeles, Cal. | 100-101-102 | Polson Rubber Co., Garrettsville, Ohio | 263 |
| Gilmer Co., L. H., (Tacony) Philadelphia, Pa. | 237 | Pratt Mfg. Co., Wm. E., Chicago, Ill. | 330 |
| Gladiator Mfg. Co., Auburn, Ind. | 173 | Price-Hollister Co., Rockford, Ill. | 339-343 inc. |
| Globe Machine & Stamping Co., Cleveland, Ohio. | 60-61 | Protexall Co., The, Abingdon, Ill. | 211 |
| Globe Mfg. Co., Battle Creek, Mich. | 189 | Pyrene Mfg. Co., Newark, N. J. | 292-293 |
| Goodrich-Lenhart Mfg. Co., Hamburg, Pa. | 344 | Radco Publications, Oakland, Cal. | 137 |
| Greb Co., The, Stoughton, Mass. | 136 | Raybestos Co., The, Bridgeport, Conn. | 642-645 inc. |
| Haartz Co., J. C., New Haven, Conn. | 321 | Rees Mfg. Co., Pittsburgh, Pa. | 233-234 |
| Hall Mfg. Co., Toledo, Ohio | 299-300 | Reliance Mfg. Co., Massillon, Ohio | 192 |
| Halstead Specialties Co., Oakland, Cal. | 175 | Romort Mfg. Co., Oakfield, Wis. | 242 |
| Hardie Mfg. Co., Hudson, Mich. | 318 | Rose Mfg. Co., Frank, Hastings, Neb. | 290 |
| Harvey Spring & Forging Co., Racine, Wis. | 212-213 | Roth Mfg. Co., G. A., Hastings, Neb. | 304 |
| Hayes Pump & Planter Co., Galva, Ill. | 40-41 | Russell Mfg. Co., Middletown, Conn. | 310 |
| Hilab Products Co., Indianapolis, Ind. | 174 | Schrader's Son, Inc., A., Brooklyn, N. Y. | 36 |
| Hinckley-Myers Co., Jackson, Mich. | 348 | Schroeder & Tremayne, Inc., St. Louis, Mo. | 241 |
| Hinson Mfg. Co., The, Waterloo, Iowa. | 179-180 | Scranton Glass Instrument Co., Scranton, Pa. | 275 |
| Holmes Co., Ernest, Chattanooga, Tenn. | 75-79 inc. | Scully Steel & Iron Co., Chicago, Ill. | 83 |
| Hutto Engineering Co., Detroit, Mich. | 118-119 | Service Station Equipment Co., Bryan, Ohio | 221-222-223 |
| Illinois Iron & Bolt Co., Carpentersville, Ill. | 629-630-631 | Sewall Paint & Varnish Co., Kansas City, Mo. | 87 |
| Imperial Brass Mfg. Co., Chicago, Ill. | 151-152 | Shaler Co., The, Milwaukee, Wis. | 356-357 |
| Irving-Cloud Publishing Co., Chicago, Ill. | 142-143 | Simoniz Co., The, Chicago, Ill. | 207-208 |
| Irving Engineering Co., Inc., Buffalo, N. Y. | 618 | Smith Welding Equipment Co., Minneapolis, Minn. | 37-38-39 |
| I-Sis Laboratories, Inc., New York, N. Y. | 92 | South Bend Lathe Works, South Bend, Ind. | 615-616-617 |
| Johns-Manville Corp., New York, N. Y. | 319 | Southern Automotive Dealer, Atlanta, Ga. | 323 |
| K-W Ignition Co., Cleveland, Ohio | 220 | Sparks-Withington Co., Jackson, Mich. | 158-161 inc. |
| Kales Stamping Co., Detroit, Mich. | 153 | Spencer-Smith Machine Co., Howell, Mich. | 80 |
| Kant-Rust Products Corp., Rahway, N. J. | 113 | Splittorf Electrical Co., Newark, N. J. | 238 |
| Kellogg Mfg. Co., Rochester, N. Y. | 23-27 inc. | Spraco Painting Equipment Co., Boston, Mass. | 320 |
| Kennedy Mfg. Co., Van Wert, Ohio | 640 | Starrett Co., L. S., Athol, Mass. | 608 |
| Keystone Reamer & Tool Co., Millersburg, Pa. | 253 | Stevens, Walden-Worcester, Inc., Worcester, Mass. | 49-50-51 |
| King Quality Products Co., Indianapolis, Ind. | 62-63-64 | Stone Mfg. Co., Chicago, Ill. | 209 |
| Kingsley-Miller Co., Chicago, Ill. | 620-621 | Storm Mfg. Co., Inc., Minneapolis, Minn. | 317 |
| Klaxon Co., Anderson, Ind. | 214-215 | Thermoid Rubber Co., Trenton, N. J. | 285-286 |
| Kokomo Automotive Mfg. Co., Kokomo, Ind. | 197 | Thomas Auto Top Co., Muncie, Ind. | 154 |
| Laminated Shim Co., Inc., Long Island City, N. Y. | 603-604 | Thompson Products, Inc., Cleveland, Ohio | 307 |
| Las-Stik Mfg. Co., Hamilton, Ohio | 335-336 | Thompson-Neaylon Mfg. Co., Chicago, Ill. | 301 |
| Lincoln Paint & Color Co., Lincoln, Neb. | 99 | Thompson Specialties, Inc., Springfield, Mass. | 52-53-54 |
| Lupton's Sons, Inc., David, Detroit, Mich. | 255 | Tingley & Co., C. O., Rahway, N. J. | 628 |
| Lyon Metal Products, Inc., Aurora, Ill. | 249-252 inc. | Toledo Steel Products Co., Toledo, Ohio | 265-266 |
| M. & M. Co., The, Cleveland, Ohio | 84 | Trade Press Publishing Co., Milwaukee, Wis. | 120 |
| Manley Mfg. Co., Bridgeport, Conn. | 8-14 inc. | Trainer National Spring Co., New Castle, Ind. | 331 |
| Manufacturer's Auto Equipment Co., Pasadena, Cal. | 172 | Trico Products Corp., Buffalo, N. Y. | 308-309 |
| Marquette Mfg. Co., St. Paul, Minn. | 30-31 also 43-47 inc. | United States Air Compressor Co., Cleveland, Ohio. | 155-156-157 |
| Metal Specialties Mfg. Co., Chicago, Ill. | 48 | Van Dorn Electric Tool Co., Cleveland, Ohio. | 199-203 inc. |
| Milwaukee Motor Products Co., Milwaukee, Wis. | 261-262 | Van Norman Machine Tool Co., Springfield, Mass. | 345-346-347 |
| Moll Mfg. Co., Denver, Colo. | 170-171 | Vellumoid Co., The, Worcester, Mass. | 69-70 |
| Morrison Jack Co., Alliance, Ohio | 277 | Victor Mfg. & Gasket Co., Chicago, Ill. | 271-272 |
| Moto Meter Co., Inc., Long Island City, N. Y. | 633-634-635 | Vichek Tool Co., Cleveland, Ohio | 352 |
| Motor, New York, N. Y. | 130-131-132 | Walker Mfg. Co., Racine, Wis. | 600-601-602 |
| Motor Service, Chicago, Ill. | 139-140 | Warner-Patterson Co., Chicago, Ill. | 612 and 632 |
| Motor West Publishing Co., Los Angeles, Cal. | 125 | Watervliet Tool Co., Inc., Albany, N. Y. | 178 |
| Motor World Wholesale, Philadelphia | 106-107 | Weaver Mfg. Co., Springfield, Ill. | 145-150 inc. |
| Multibestos Co., Walpole, Mass. | 239-240 | Wedler-Shuford Co., St. Louis, Mo. | 291 |
| McAdams Co., J. C., New Britain, Conn. | 259-260 | Weidenhoff, Inc., Joseph, Chicago, Ill. | 103-104 |
| McAleer Mfg. Co., C. H., Detroit, Mich. | 605-606-607 | Westinghouse Lamp Co., New York, N. Y. | 88-89-90 |
| McCord Radiator & Mfg. Co., Detroit, Mich. | 187-188 | Whitaker Battery Supply Co., Kansas City, Mo. | 268-269-270 |
| McQuay-Norris Mfg. Co., St. Louis, Mo. | 183-186 inc. | White & Bagley Co., Worcester, Mass. | 267 |
| National Carbon Co., Inc., New York, N. Y. | 230-231-232 | Wilkening Mfg. Co., Philadelphia, Pa. | 1-2 |
| National Lamp Works of G. E. Co., Cleveland, Ohio. | 109-110-111 | Williams & Co., J. H., Buffalo, N. Y. | 32-33-34-35 |
| National Standard Co., Niles, Mich. | 305-306 | Willis-Jones Machinery Co., Seattle, Wash. | 91 |
| Noblitt-Sparks Industries, Indianapolis, Ind. | 168-169 | Wright Mfg. Co., Lisbon, Ohio | 15 |
| Noera Mfg. Co., Waterbury, Conn. | 276 | "X" Laboratories, New York, N. Y. | 256-257 |
| Norlipp Co., The, Chicago, Ill. | 358 | Yankee Metal Products Corp., New York, N. Y. | 71 |
| Ohio Parts Co., The, Cincinnati, Ohio | 85-86 | Yellow Jack-It Mfg. Co., Chicago, Ill. | 619 |
| | | Zip Abrasive Co., Cleveland, Ohio | 204 |

Prices, Weights and Equipment of Current Passenger Car Models

Important changes in Specifications and Price Tables since last issue:

Chrysler "75"
New Models added

Durant "60"
Prices and Body Models

| Passengers and Model | F.O.B. Price | Doors | Net Weight* | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight* | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight* | Standard Equipment |
|------------------------|--------------|-------|-------------|--------------------|-----------------------|--------------|-------|-------------|--------------------|-----------------------|--------------|-------|-------------|--------------------|
| CADILLAC "341" | | | | | CUNNINGHAM | | | | | "60" | | | | |
| 2p. Roadster.... | \$3350 | 2 | 4690 | aeghlmpnx | 4p. Sp. Touring.... | \$6500 | 4 | 4500 | Ceghijklmnp | ... Roadster.... | \$755 | ... | ... | ... |
| 4p. Phaeton.... | 3450 | 4 | 4725 | aeghlmpnx | 7p. Touring.... | 7000 | 4 | 4600 | Ceghijklmnp | ... DeL. Rdster.... | 845 | ... | ... | ... |
| 4p. Sp. Phaeton.... | 3950 | 4 | 5110 | Beghiklmnp | 4p. Coupe.... | 8000 | 2 | 4700 | Ceghijklmnp | ... Coupe.... | 755 | 2 | ... | ... |
| 7p. Touring.... | 3450 | 4 | 4760 | aeghlmpnx | 6p. Limousine.... | 8500 | 4 | 5000 | Ceghijklmnp | 5p. Sedan.... | 765 | 2 | ... | ... |
| 2-4p. Coupe.... | 3295 | 2 | 4930 | aeghlmpnx | | | | | | 5p. Sedan.... | 845 | 4 | ... | ... |
| 2-4p. Conv. Coup.... | 3595 | 2 | 4835 | aeghlmpnx | DAVIS "99" | | | | | ... DeL. Cab.... | 895 | ... | ... | ... |
| 5p. Coupe.... | 3595 | 2 | 4910 | aeghlmpnx | 4p. Polo Rdster.... | \$1795 | 2 | 3295 | aeghmnr | 5p. Sedan.... | 935 | 4 | ... | ... |
| 5p. Sedan.... | 3695 | 4 | 5040 | aeghlmpnx | 5p. Touring.... | 1795 | 4 | 3325 | aeghmnr | 5p. Touring.... | 795 | 4 | 2385 | aghmnr |
| 5p. Town Sedan.... | 3495 | 4 | 5030 | aeghlmpnx | 4p. Coupe.... | 1865 | 2 | 3345 | aeghmnr | 2-4p. Sp. Rdster.... | 1025 | 2 | 2365 | Beghiklmnp |
| 7p. Sedan.... | 3795 | 4 | 5140 | aeghlmpnx | 5p. Emp. Sedan.... | 1885 | 4 | 3475 | aeghmnr | 2-4p. Collap. Cab.... | \$1045 | 2 | 2525 | aghmnr |
| 7p. Imp. Sedan.... | 3995 | 4 | 5180 | aeghlmpnx | | | | | | 5p. Sedan.... | 975 | 2 | 2425 | aghmnr |
| "Fleetwood" | | | | | DE SOTO | | | | | 5p. Sedan.... | 975 | 2 | 2600 | aghmnr |
| 5p. Sedan.... | \$4195 | 4 | ... | aeghlmpnx | 2-4p. Roadster.... | \$845 | 2 | 2635 | ghnw | 5p. Brougham.... | 1075 | 4 | 2675 | aghmnr |
| 5p. Sedan Cab.... | 4195 | 4 | ... | aeghlmpnx | 5p. Phaeton.... | 845 | 4 | 2445 | ghn | 5p. Sedan.... | 1175 | 4 | 2695 | Beghiklmnp |
| 7p. Sedan.... | 4295 | 4 | ... | aeghlmpnx | 2-4p. Roadster.... | 880 | 2 | 2390 | B | | | | | |
| 7p. Sedan Cab.... | 4195 | 4 | ... | aeghlmpnx | 2p. Bus. Coupe.... | 845 | 2 | 2465 | ghn | ELCAR | | | | |
| 5p. Imperial.... | 4345 | 4 | ... | aeghlmpnx | 5p. Sedan.... | 845 | 2 | 2580 | ghn | 4p. Roadster.... | \$1295 | 2 | 2580 | ahnr |
| 5p. Imperial Cab.... | 4345 | 4 | ... | aeghlmpnx | | | | | | 5-7p. Touring.... | 1295 | ... | ... | ... |
| 7p. Imperial.... | 4345 | 4 | ... | aeghlmpnx | DIANA "St. 8" | | | | | 5p. Brougham.... | 1295 | ... | ... | ... |
| 5p. Club Cab't.... | 4395 | ... | ... | ... | 5p. Phaeton.... | \$1695 | 4 | 3100 | agmn | 5p. Sedan.... | 1295 | 2 | 2670 | ahnr |
| 5p. Phaeton Sed.... | 5750 | ... | ... | ... | 5p. Roy. Rdster.... | 1795 | 2 | 2995 | agmnw | 5p. Sedan.... | 1295 | 4 | 2750 | ahnr |
| 5p. Im. Pha. Sed.... | 5995 | ... | ... | ... | 5p. P.B. Rdster.... | 1895 | 2 | 2995 | Bgmnr | "8-78" Std. | | | | |
| ... Town Cab Con.... | 5500 | 4 | ... | aeghlmpnx | 5p. Cab. Rdster.... | 1995 | 2 | 3160 | aghmnr | 2-4p. Roadster.... | 1395 | 2 | ... | ahnr |
| ... Lim Bro'm Con.... | 5500 | 4 | ... | aeghlmpnx | 5p. Collap. Rdstr.... | 2195 | 2 | 3160 | aghmnr | 5p. Touring.... | 1395 | ... | ... | ahnr |
| CHANDLER | | | | | 5p. 2d. Sedan.... | 1795 | 2 | 3170 | aghmno | 2-4p. Coupe.... | 1395 | 2 | ... | ahnr |
| "65" | | | | | 5p. 4d. Sedan.... | 2095 | 4 | 3275 | aghmnot | 5p. Sedan.... | 1395 | 2 | ... | ahnr |
| 5p. Touring.... | \$ 895 | 4 | ... | ahmn | DODGE BROS. | | | | | 5p. Sedan.... | 1395 | 4 | ... | ahnr |
| 5p. Sportster.... | 995 | 2 | ... | ahmn | "Std. 6" | | | | | 5p. Sedan.... | 1495 | ... | ... | ahnr |
| 3p. Coupe.... | 875 | 2 | ... | ahmn | 2-4p. Conv't Cab.... | \$945 | 2 | 2570 | Bghr | 5p. Sedan.... | 1495 | ... | ... | ahnr |
| 5p. Sedan.... | 895 | 4 | ... | ahmn | 2p. Coupe.... | 875 | 2 | 2490 | aghr | 5p. Sedan.... | 1495 | ... | ... | ahnr |
| 2-4p. Coupe.... | 955 | 2 | ... | ahmn | 5p. Sedan.... | 895 | 4 | 2710 | aghr | 5p. Sedan.... | 1495 | ... | ... | ahnr |
| 5p. DeL. Sedan.... | 995 | 4 | ... | ahmn | 5p. Sedan DeL.... | 970 | 4 | 2780 | aghr | 5p. Sedan.... | 1495 | ... | ... | ahnr |
| 2-4p. Cabriolet.... | 1075 | 2 | ... | ahmn | 5p. Sp. Sed. DeL.... | 1045 | 4 | ... | Beghikr | 5p. Sedan.... | 1495 | ... | ... | ahnr |
| "Royal 75" | | | | | "Victory 6" | | | | | "8-82" | | | | |
| 5p. Sedan, 2d.... | 1295 | 2 | ... | ... | 5p. Touring.... | 995 | 4 | 2775 | aghmnr | 5-7p. Touring.... | 1695 | ... | ... | aghmnr |
| 2-4p. Coupe.... | 1295 | ... | ... | ... | 5p. Sp. Touring.... | 1245 | 4 | ... | Beghikmr | 2-4p. Roadster.... | 1695 | 2 | ... | aghmnr |
| 5p. Sedan, 4d.... | 1395 | 4 | ... | ... | 4p. Sp. Roadster.... | 1245 | 2 | ... | Beghikmr | 4p. Coupe.... | 1695 | 2 | ... | aghmnr |
| 5p. DeL. Sedan.... | 1495 | 4 | ... | ... | 2p. Coupe.... | 1045 | 2 | 2650 | aghmnr | 5p. Std. Sedan.... | 1695 | 2 | ... | aghmnr |
| "Big Six" | | | | | 4p. Coupe DeL.... | 1170 | 2 | 2850 | Beghikmr | 5p. Prin. Sedan.... | 1695 | 4 | 3490 | aghmnr |
| 7p. Touring.... | 1725 | 4 | 3360 | ahjlmnrw | 5p. Sedan.... | 1095 | 4 | 2855 | aghmnr | 5p. Prin. Sedan.... | 1895 | 4 | ... | aghmnr |
| 5p. Met. Sedan.... | 1525 | 4 | 3800 | ahjlmnr | 4p. Brougham.... | 1095 | 2 | 2750 | aghmnr | "8-91" | | | | |
| 4p. Coupe.... | 1725 | 2 | 3535 | ahmnnot | 4p. DeL. Bro'm.... | 1170 | 2 | 2850 | Beghikmr | 2-4p. Roadster.... | 1995 | ... | ... | aghmnr |
| 3p. Ctry. Club.... | 1725 | 2 | 3535 | ahmnnot | 5p. DeL. Sedan.... | 1170 | 4 | 2955 | aghmnr | 4p. Coupe.... | 2295 | ... | ... | aghmnr |
| 5p. Royal Sedan.... | 1725 | 4 | 3800 | ahmnnot | 5p. Sp. Sedan.... | 1295 | 4 | 3150 | Beghikmr | 5p. Prin. Bro'm.... | 2295 | ... | ... | aghmnr |
| 2-4p. Cabriolet.... | 1825 | 2 | 3450 | ahmnnot | "Senior" | | | | | 5p. Prin. Sedan.... | 2295 | 4 | ... | aghmnr |
| 7p. Sedan.... | 1925 | 4 | 3895 | ahmnnot | 5p. Vic. Bro'm.... | 1575 | 2 | ... | agmnp | 5-7p. Touring.... | 2465 | 4 | ... | aghmnr |
| 7p. Berline Sed.... | 2025 | 4 | 3945 | ahmnnot | 2-4p. Coupe.... | 1675 | 4 | ... | agmnp | 5p. Std. Sedan.... | 2465 | 4 | ... | aghmnr |
| "Royal 85" | | | | | 5p. Sport Sed.... | 1795 | 4 | ... | Beghikmr | 7p. Std. Sedan.... | 2565 | 4 | ... | aghmnr |
| 7p. Touring.... | 1995 | 4 | 3655 | ahjlmnpwx | 2-4p. Sp. Coupe.... | 1795 | 2 | ... | Beghikmr | | | | | |
| 4p. Coupe.... | 1925 | 2 | 3640 | ahmnnot | 5p. Landau Sed.... | 1845 | ... | ... | Beghikmr | ERSKINE SIX | | | | |
| 4p. Ctry. Club.... | 1925 | 2 | 3640 | ahmnnot | | | | | | "52" | | | | |
| 5p. Sedan.... | 1795 | 4 | 3900 | ahmnnot | du PONT "E" | | | | | 5p. Touring.... | \$835 | 4 | ... | aghr |
| 7p. Sedan.... | 2195 | 4 | 3950 | ahmnnot | 4p. Roadster.... | \$2800 | ... | 3700 | afghikmnpnx | 5p. Club Sedan.... | 890 | 2 | ... | aghr |
| 3-5p. Cabriolet.... | 2095 | 2 | 3600 | ahmnnot | 5p. Touring.... | 2800 | ... | 3850 | afghikmnpnx | 2p. Cabriolet.... | 875 | 2 | ... | aghr |
| 5p. DeL. Sedan.... | 1995 | 4 | 4000 | Bhilmnnot | 4p. Coupe.... | 3200 | ... | 3850 | afghikmnpnx | 5p. Sedan.... | 945 | 4 | 2600 | aghr |
| 7p. Berline Sed.... | 2295 | 4 | 4000 | Bhilmnnot | 4p. Conv't Coupe.... | 3400 | ... | 3800 | afghikmnpnx | 4p. Royal Cab.... | 995 | 2 | ... | Beghikr |
| CHEVROLET | | | | | 5p. Sedan.... | 3400 | ... | 4100 | afghikmnpnx | 5p. Royal Sedan.... | 1045 | 4 | 2600 | Beghikr |
| 2p. Roadster.... | \$495 | 2 | 2030 | dr | 5p. Con. Sedan.... | 3750 | 4 | 4100 | Bfghikmnpnx | ESSEX | | | | |
| 5p. Touring.... | 495 | 4 | 2090 | dr | "141" W.B. | | | | | "Super Six" | | | | |
| 5p. Coach.... | 585 | 2 | 2260 | dr | ... Sp. Phaeton.... | \$4360 | ... | ... | Beghikpr | 5p. Phaeton.... | \$750 | 4 | 2305 | ahmr |
| 2p. Coupe.... | 595 | 2 | 2235 | dr | 7p. Touring.... | 4560 | ... | ... | Beghikpr | 2-4p. Roadster.... | 850 | 2 | 2365 | ahmr |
| 5p. Sedan.... | 675 | 4 | 2435 | dr | ... Conv. Coupe.... | 4360 | ... | ... | Beghikpr | 2-4p. Coupe.... | 775 | 2 | 2535 | ahmr |
| 2-4p. Con. Sp. Cab.... | 695 | 2 | 2265 | dr | 5p. Sedan.... | 4410 | ... | ... | Beghikpr | 5p. Sedan.... | 795 | 4 | 2680 | ahmr |
| 5p. Imperial.... | 715 | 4 | 2405 | dr | 5p. Victoria.... | 4410 | ... | ... | Beghikpr | 5p. Coach.... | 735 | 2 | 2560 | ahmr |
| CHRYSLER | | | | | 5p. Limousine.... | 4675 | ... | ... | Beghikpr | FALCON-KNIGHT | | | | |
| "65" | | | | | 7p. Sedan.... | 4675 | ... | ... | Beghikpr | "12" | | | | |
| 2-4p. Roadster.... | \$1065 | 2 | 2730 | aghn | ... Conv. Cab.... | 5150 | ... | ... | Beghikpr | 5p. Touring.... | 995 | 2700 | ... | ... |
| 5p. Touring.... | 1075 | 4 | 2770 | aghn | ... Town Cab.... | 5750 | ... | ... | Beghikpr | 4p. G.G. Rdster.... | 1195 | ... | 2935 | Beghiklmnp |
| 2p. Bus. Coupe.... | 1040 | 2 | 2780 | aghn | | | | | | 5p. Sedan.... | 995 | 2 | 2800 | ghnr |
| 5p. Sedan, 2d.... | 1065 | 2 | 2905 | aghn | DURANT | | | | | 2-4p. Coupe.... | 1045 | ... | 2800 | ghnr |
| 5p. Sedan, 4d.... | 1145 | 4 | 2960 | aghn | "Four" | | | | | 5p. Sedan.... | 1095 | 4 | 2875 | ghnr |
| 2-4p. Coupe.... | 1145 | 2 | 2875 | aghn | ... Roadster.... | \$595 | ... | 1950 | ah | FORD "A" | | | | |
| "75" | | | | | ... DeL. Rdster.... | 675 | ... | ... | ah | 2-4p. Roadster.... | \$385 | 2 | 2066 | Bgnr |
| 2-4p. Roadster.... | 1555 | 2 | 3190 | aeghmnr | ... Coupe.... | 595 | ... | 2185 | ah | 5p. Phaeton.... | 395 | 4 | 2150 | Bgnr |
| 2-4p. Coupe.... | 1535 | 2 | 3235 | aeghmnr | 5p. Sedan.... | 595 | 2 | 2330 | ah | 2p. Bus. Coupe.... | 495 | 2 | 2170 | Bgnr |
| 5p. Royal Sedan.... | 1535 | ... | 3340 | aeghmnr | 5p. Sedan.... | 595 | 4 | 2480 | ah | 5p. Tudor Sedan.... | 495 | 2 | 2336 | Bgnr |
| 4-5p. Town Sedan.... | 1655 | ... | 3360 | aeghmnr | 5p. Sedan.... | 595 | 4 | 2480 | ah | 2-4p. Sp. Coupe.... | 550 | 2 | 2223 | Bgnr |
| 2-4p. Con. Coupe.... | 1695 | ... | ... | ... | ... DeL. Sedan.... | 775 | 4 | ... | ... | 2p. Std. Coupe.... | 550 | 2 | 2220 | Bgnr |
| 5p. Con. Sedan.... | 2245 | ... | ... | ... | | | | | | 5p. Fordor Sedan.... | 625 | 4 | 2386 | Bgnr |
| "Imp. 80" | | | | | | | | | | | | | | |
| 2-4p. Roadster.... | \$2795 | 3 | 3870 | aeghlmpnrwx | | | | | | | | | | |
| 5p. Sedan.... | 2945 | 4 | 4125 | aeghlmpnrwx | | | | | | | | | | |
| 7p. Sedan.... | 3075 | 4 | 4250 | aeghlmpnrwx | | | | | | | | | | |
| 5p. Town Sedan.... | 2995 | 4 | 4140 | aeghlmpnrwx | | | | | | | | | | |
| 7p. Sedan Lim.... | 3495 | 4 | 4285 | aeghlmpnrwx | | | | | | | | | | |

*-Italic figures denote shipping weight.
A-Wood wheels with spare.
B-Wood wheels.
C-Wire wheels with spare.
D-Wire wheels.
E-Optional wheels with spare.

*-Type of wheels optional.
D-Disk wheels with spare.
A-Disk wheels.
B-Front and rear bumpers.
C-Front bumper.
D-Shock absorbers or rubbers.
E-Automatic windshield wiper.

KEY TO SYMBOLS

I-Trunk and trunk rack.
J-Trunk rack, no trunk.
K-Spare tire.
L-Spare tire lock.
M-Engine heat indicator.
N-Dash gasoline gauge.

O-Car heater.
P-Clear lighter.
Q-Rear traffic signal.
R-Spotlight.
S-Vanity and smoking set.
T-Smoking set.

U-Vanity set.
V-Windshield wings.
W-Clock.
X-Overall length.
Y-Prices on application.

Prices, Weights and Equipment of Current Passenger Car Models

| Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment | | | | | | | | | | | | | | | | | | | | |
|---|--------------|-------|------------|--------------------|----------------------|--------------|-------|------------|--------------------|---------------------------------|--------------|-------|------------|--------------------|----------------------|--------------|-------|------------|--------------------|-----------------------|-------|-------|------|------------------|---------------------|-------|-------|------|--|-----------------------|--|--|--|--|--|--|--|--|--|
| FRANKLIN "Series 12 B" 119" W.B. | | | | | | | | | | HUPMOBILE "Century 6" | | | | | | | | | | LINCOLN "8" | | | | | | | | | | MARMON "68" | | | | | | | | | |
| 3p. Coupe..... | \$269 | | 3450 | aeghknprx | 5p. Phaeton..... | \$1425 | 2900 | aghnr | | 2p. Spt. Rdster.. | \$4600 | 24700 | aeghknprx | | 2-4p. Roadster... | \$1565 | 22700 | ahmrnw | | 5p. Phaeton..... | \$895 | 42340 | an | | 5p. Phaeton..... | \$895 | 42340 | an | | | | | | | | | | | |
| 4-5p. Vic. Bro'm.. | \$2760 | | 3550 | aeghknprx | 2-4p. Sportster... | 1435 | 22820 | aghnr | | 2-4p. Club Rdstr. | 4600 | 4740 | aeghknprx | | 5p. Sedan..... | 1465 | 42897 | ahmrnt | | 5p. Coach..... | 995 | 22420 | an | | 5p. Coach..... | 995 | 22420 | an | | | | | | | | | | | |
| 5p. Sedan..... | 2790 | | 3580 | aeghknprtx | 7p. Phaeton..... | 1455 | 42955 | aghnr | | 7p. Spt. Touring. | 4600 | 4940 | aeghknprx | | 5p. Vic. Coupe... | 1520 | 22867 | ahmrnt | | 5p. Roy Sedan... | 1195 | 22520 | ahin | | 5p. Roy Sedan... | 1195 | 22520 | ahin | | | | | | | | | | | |
| 5p. Ox. Sedan..... | 2790 | | 3580 | aeghknprtx | 5p. Sedan 2d.... | 1345 | 22975 | aghnr | | 4p. Spt. Phaeton. | 4600 | 4910 | beghknprwx | | 2-1p. Coupe..... | 1465 | 22827 | ahmrnt | | 5p. Roy Sedan... | 1295 | 42605 | ahin | | 5p. Roy Sedan... | 1295 | 42605 | ahin | | | | | | | | | | | |
| 5p. Spt. Sedan.... | 2910 | | 3630 | aeghknprtx | 4p. Coupe..... | 1385 | 22965 | aghnr | | 4p. Coupe..... | 4600 | 4805 | aeghknprx | | | | | | 5p. Touring..... | 995 | 42340 | agh | | 5p. Touring..... | 995 | 42340 | agh | | | | | | | | | | | | |
| 3-5p. Conv't Cpe. 128" W.B. | 2850 | | 3570 | aeghknprtx | 5p. Sedan..... | 1395 | 43040 | aghnr | | 4p. Sedan..... | 4800 | 4930 | aeghknprx | | 2-4p. Roadster... | 1965 | 23007 | ahlmprwx | | 5p. Sedan, 2d.... | 1295 | 22520 | agh | | 5p. Sedan, 2d.... | 1295 | 22520 | agh | | | | | | | | | | | |
| 2-4p. Sp. Runab't. | 2975 | | 3440 | aeghknprx | 2-4p. Cabriolet.. | 1475 | 22965 | aghnr | | 5p. Sedan..... | 4800 | 5010 | aeghknprx | | 2-4p. Coupe..... | 1965 | 23067 | ahlmprx | | 5p. Sedan, 4d.... | 1345 | 42605 | agh | | 5p. Sedan, 4d.... | 1345 | 42605 | agh | | | | | | | | | | | |
| 5p. Sp. Touring... | 2975 | | 3630 | aeghknprx | 5p. Phaeton..... | 1905 | 3285 | aghmnv | | 2p. Coupe..... | 5000 | 4720 | aeghknprx | | 5p. Town Coupe... | 3195 | 24452 | aeghknprx | | 2p. Std. Roadster | 1295 | 22720 | agh | | 2p. Std. Roadster | 1295 | 22720 | agh | | | | | | | | | | | |
| 7p. Touring..... | 3060 | | 3630 | aeghknprx | 2-4p. Sportster.. | 1915 | 3335 | aghmnv | | 7p. Sedan..... | 5000 | 5050 | aeghknprx | | 5p. Brougham.... | 3565 | 44525 | aeghknprx | | 5p. Roy Roadstr'... | 1395 | 2635 | agh | | 5p. Roy Roadstr'... | 1395 | 2635 | agh | | | | | | | | | | | |
| 7p. Sedan..... | 2980 | | 3790 | aeghknprtx | 7p. Phaeton..... | 1935 | 3355 | aghmnv | | 7p. Limousine.... | 5200 | 5165 | aeghknprtx | | 5p. Sedan..... | 3495 | 24373 | aeghknprtx | | 5p. Sedan..... | 1395 | 4 | agh | | 5p. Sedan..... | 1395 | 4 | agh | | | | | | | | | | | |
| 7p. Ox. Sedan.... | 2980 | | 3790 | aeghknprtx | 5p. Sedan, 2d.... | 1825 | 23385 | aghmnv | | 4p. Limousine.... | 5500 | 5380 | aeghknprx | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| 7p. Limousine.... | 3080 | | 3870 | aeghknprtx | 4p. Coupe..... | 1865 | 3375 | aghmnv | | 7p. Brougham.... | 6500 | 5025 | aeghknprx | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | 5p. Sedan, 4d.... | 1875 | 43455 | aghmnv | | 6p. Ber. Landau. | 6500 | 5090 | aeghknprx | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | 2-4p. Cabriolet.. | 1955 | 3345 | aghmnv | | 7p. Cabriolet.... | 6600 | 4935 | aeghknprx | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | 7p. LeBaron Cab. | 7000 | 5165 | aeghknprx | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | 7p. Holbrook Cab. | 7200 | 5405 | aeghknprx | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | 7p. Collap. Cab. | 7300 | 5140 | aeghknprx | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 5p. Sedan..... | 1445 | 42810 | agh | | 5p. Sedan..... | 1445 | 42810 | agh | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

KEY TO SYMBOLS

*—Italic figures denote shipping weight.

A—Wood wheels with spare.
a—Wood wheels.
B—Wire wheels with spare.
b—Wire wheels.
C—Optional wheels with spare.

- c—Type of wheels optional.
- D—Disk wheels with spare
- d—Disk wheels.
- e—Front and rear bumpers.
- f—Front bumper.
- g—Shock absorbers or snubbers.
- h—Automatic windshield wiper.

i—Trunk and trunk rack.
j—Trunk rack, no trunk.
k—Spare tire.
l—Spare tire lock.
m—Engine heat indicator.
n—Dash gasoline gauge.

c—Car heater.
 p—Cigar lighter.
 r—Rear traffic signal.
 s—Spotlight.
 t—Vanity and smoking set.
 u—Smoking set.

v—Vanity set.
 w—Windshield wings.
 x—Clock
 †—Overall length.
 §—Prices on application.

Prices, Weights and Equipment of Current Passenger Car Models

| Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment | Passengers and Model | F.O.B. Price | Doors | Net Weight | Standard Equipment |
|------------------------|--------------|-------|------------|--------------------|-----------------------|--------------|-------|------------|--------------------|----------------------|--------------|-------|------------|----------------------|----------------------|--------------|-------|------------|--------------------|
| OLDSMOBILE | | | | | PIERCE-ARROW | | | | | ROLLS ROYCE | | | | | STUTZ "BB" | | | | |
| "F-28" | | | | | "81" | | | | | "Si. Ghost" | | | | | "Custom" | | | | |
| 2-4p. Sp. Rdstr. | \$905 | 2 | 2610 | aeghmnr | 2p. Runabout. | \$2600 | 2 | 3350 | afghlmnr | Open Models. | | | | | 2p. Speedster. | \$3495 | 2 | 4478 | aefghlmnr |
| 5p. Sp. Touring. | 995 | 4 | 2640 | aeghmnr | 4p. Touring. | 2700 | 4 | 3365 | afghlmnr | Closed Models. | | | | | 4p. Speedster. | 3595 | 4 | 4509 | aefghlmnr |
| 2p. Coupe. | 925 | 2 | 2660 | aeghmnr | 7p. Touring. | 2850 | 4 | 3500 | afghlmnr | "New Phan" | | | | | 4p. Speedster. | 3845 | 4 | 4600 | aefghlmnr |
| 5p. Sedan, 2d. | 925 | 2 | 2795 | aeghmnr | 7p. Club Bro'm | 2475 | 2 | 3540 | afghlmnr | Open Models. | | | | | 2p. Black Hawk | 4895 | 2 | 4302 | aefghlmnr |
| 2-4p. Sp. Coupe. | 995 | 2 | 2675 | aeghmnr | 2p. Coupe metal. | 2650 | 2 | 3460 | afghlmnr | Closed Models. | | | | | 4p. Black Hawk | 4945 | 2 | | aefghlmnr |
| 5p. Sedan, 4d. | 1025 | 4 | 2870 | aeghmnr | 5p. Brougham. | 3250 | 2 | 3540 | afghlmnr | | | | | 2p. Coupe | 3495 | 2 | 4649 | aefghlmnr | |
| 5p. Landau Sed. | 1085 | 4 | 2860 | aeghmnr | 2p. Coupe leath. | 2650 | 2 | 3490 | afghlmnr | | | | | 4p. Vic. Coupe | 3495 | 2 | 4679 | aefghlmnr | |
| "DeLuxe Series" | | | | | 5p. Club Sedan. | 2750 | 4 | 3635 | afghlmnr | | | | | 5p. Coupe | 3545 | 2 | 4769 | aefghlmnr | |
| 5p. Phaeton. | 1145 | 4 | 2800 | Begh jklmnr | 2-4p. Coupe met. | 2750 | 2 | 3530 | afghlmnr | | | | | 5p. Sedan. | 3570 | 4 | 4977 | aefghlmnr | |
| Road-ter. | 1145 | 2 | 2770 | Begh jklmnr | 5p. Sedan. | 2750 | 4 | 3605 | afghlmnr | | | | | 5p. Brougham. | 3570 | 4 | 4820 | aefghlmnr | |
| Spec Coupe. | 995 | 2 | 2760 | aegh jklm | 2-4p. Coupe lea. | 2750 | 2 | 3560 | afghlmnr | | | | | 2p. Cab. Coupe. | 3895 | 2 | 4520 | aefghlmnr | |
| Spec Co.ape. | 1145 | 2 | 2840 | Begh jklmnr | 7p. Con't Cpe. | 2850 | 2 | 3455 | afghlmnr | | | | | 7p. Speedster | 3895 | 4 | 4748 | aefghlmnr | |
| Sedan. | 1175 | 4 | 3005 | Begh jklmnr | 5p. Club. Land. | 2850 | 4 | 3640 | afghlmnr | | | | | 5p. Country Club | | | | aefghlmnr | |
| DeL. Landau | 1235 | 4 | 3005 | Begh jklmnr | 7p. Sedan. | 2850 | 4 | 3700 | afghlmnr | | | | | 7p. Sedan. | 3895 | 4 | 5018 | aefghlmnr | |
| OVERLAND | | | | | 4p. Coupe. | 2950 | 2 | 3490 | afghlmnr | | | | | 7p. Sedan Lim. | 3995 | 4 | 5159 | aefghlmnr | |
| "4" Whippet | | | | | 2-4p. Conv't Cpe. | 2950 | 2 | 3525 | afghlmnr | | | | | 5p. Collap. Sed. | 3995 | 5 | 5020 | aefghlmnr | |
| 5p. Touring. | \$455 | 4 | 1985 | agr | 7p. Enc. Dr. Lim. | 2950 | 4 | 3755 | afghlmnr | | | | | 7p. Collap. Lim. | 4095 | 5 | 5030 | aefghlmnr | |
| 2-4p. Roadster. | 525 | 2 | 1932 | agr | 5p. Sedan Land. | 3550 | 4 | 3805 | afghlmnr | | | | | 7p. Collap. Lim. | 4195 | 5 | | aefghlmnr | |
| 2p. Coupe. | 535 | 2 | 2060 | agr | 7p. Sed. Landau. | 3700 | 4 | 3700 | afghlmnr | | | | | "Weyman-Cus." | | | | | |
| 2-4p. Coupe Cab. | 595 | 2 | 2122 | agr | 7p. Enc. Dr. Land. | 3800 | 4 | 3755 | afghlmnr | | | | | 131" W.B. | | | | | |
| 5p. Coach. | 535 | 2 | 2160 | agr | 5p. Opera Bro'm | 7000 | | | | | | | | 2p. Black Hawk | 4895 | 2 | 4302 | aefghlmnr | |
| 5p. Sedan. | 610 | 4 | 2210 | agr | "36" | | | | | | | | | 5p. Sedan. | 4120 | 4 | 4393 | aefghlmnr | |
| "6" Whippet | | | | | 2p. Runabout. | 5875 | 2 | 4560 | afghlr | | | | | 4p. Sedan. | 4120 | 2 | | aefghlmnr | |
| 2-4p. Roadster. | 685 | 2 | 2228 | agr | 4p. Touring. | 5875 | 4 | 4510 | afghlr | | | | | 5p. Landau Sed. | 4420 | 4 | | aefghlmnr | |
| 5p. Touring. | 615 | 4 | 2333 | agr | 7p. Touring. | 5875 | 4 | 4595 | afghlr | | | | | 145" W.B. | | | | | |
| 2-4p. Coupe. | 695 | 2 | 2356 | agr | 7p. Sedan. | 5875 | 4 | 4815 | afghlr | | | | | 5p. Sedan. | 4495 | 4 | | aefghlmnr | |
| 5p. Coach. | 695 | 2 | 2423 | agr | 7p. Lim. Encl. | 5875 | 4 | 4870 | afghlr | | | | | 5p. Sedan. | 4545 | 4 | | aefghlmnr | |
| 5p. Sedan. | 770 | 4 | 2484 | agr | 3p. Coupe. | 6375 | 2 | 4760 | afghlr | | | | | 7p. Sedan. | 4745 | 4 | | aefghlmnr | |
| PACKARD | | | | | 4p. Cpe. Sedan. | 6375 | 2 | 4795 | afghlr | | | | | 7p. Limousine. | 4995 | 4 | 4778 | aefghlmnr | |
| "626" | | | | | 4p. Sedan. | 6375 | 4 | 4830 | afghlr | | | | | 7p. Landau Lim. | 5295 | 4 | | aefghlmnr | |
| 5p. Sedan. | \$2435 | 4 | 4185 | dghmnr | 7p. Enc. Dr. Lan. | 6000 | 4 | 4895 | afghlr | | | | | "Salon Cus." | | | | | |
| 2-4p. Coupe. | 2510 | 2 | 4100 | dghmnr | 7p. Sedan Land. | 6000 | 4 | 4840 | afghlr | | | | | 5p. PW Sedan. | 6345 | 4 | | aefghlmnr | |
| 2p. Con. Coupe | 2585 | 2 | 4020 | dghmnr | 4p. Lim. Encl. | 6375 | 4 | 4840 | afghlr | | | | | 7p. PW Sedan. | 6345 | 4 | 5014 | aefghlmnr | |
| "63" | | | | | 4p. C. C. Sedan. | 6475 | 4 | 4805 | afghlr | | | | | 7p. Con. T'n Car | 6895 | 4 | 5044 | aefghlmnr | |
| 2-4p. Runabout. | 2535 | 2 | 3905 | dghmnr | 2p. Coupe. | 6600 | 2 | 4745 | afghlr | | | | | VELIE | | | | | |
| 5p. Phaeton. | 2535 | 4 | 3905 | dghmnr | 4p. Sedan Land. | 6600 | 4 | 4795 | afghlr | | | | | "6-55" | | | | | |
| 7p. Touring. | 2635 | 4 | 3950 | dghmnr | 4p. Enc. Dr. Land. | 6600 | 4 | 4880 | afghlr | | | | | 3p. Coupe. | \$1195 | 2 | | ahmnr | |
| 4p. Coupe. | 2735 | 4 | 4225 | dghmnr | 7p. Fr. Limou. | 7500 | 4 | 4740 | afghlr | | | | | 5p. Coupe. | 1195 | 2 | | ahmnr | |
| 5p. Club Sedan. | 2735 | 4 | 4240 | dghmnr | 7p. Fr. Landau. | 8000 | 4 | 4865 | afghlr | | | | | 5p. Spec. Sedan. | 1195 | 4 | | ahmnr | |
| 7p. Sedan. | 2735 | 4 | 4440 | dghmnr | PLYMOUTH | | | | | | | | | 5p. Royal Sedan. | 1195 | 4 | | ahmnr | |
| 7p. Sedan Lim. | 2835 | 4 | 4475 | dghmnr | 2-4p. Roadster. | \$675 | 4 | 2160 | ah | | | | | "6-68" | | | | | |
| "640" | | | | | 5p. Touring. | 695 | 4 | 2255 | ah | | | | | 5p. Std. Touring. | 1195 | 4 | 2960 | aeghmnr | |
| 2-4p. Runabout. | 3175 | 2 | | | 2-4p. Roadster. | 710 | 2 | 2250 | B | | | | | 5p. Sp. Touring. | 1265 | 4 | 2985 | aeghmnr | |
| 5p. Phaeton. | 3175 | 4 | | | 2p. Coupe. | 685 | 2 | 2295 | ah | | | | | 3-5p. Coupe. | 1265 | 2 | 2980 | aeghmnr | |
| 7p. Touring. | 3275 | 4 | | | 5p. Sedan, 2d. | 700 | 2 | 2435 | ah | | | | | 5p. Coupe. | 1265 | 2 | 3070 | aeghmnr | |
| 2p. Coupe. | 3250 | 2 | | | 2-4p. DeL. Coupe | 735 | | | ah | | | | | 5p. Spec. Sedan. | 1265 | 4 | 3100 | aeghmnr | |
| 2-4p. Conv. Cpe. | 3350 | 2 | | | 5p. Sedan, 4d. | 735 | 4 | 2460 | ah | | | | | 5p. Royal Sedan. | 1265 | 4 | 3100 | aeghmnr | |
| 5p. Club Sedan. | 3750 | 4 | | | PONTIAC "6" | | | | | | | | | "6-78" | | | | | |
| 7p. Sedan. | 3750 | 4 | | | 2-4p. Roadster. | \$745 | 2 | 2270 | ahn | | | | | 5p. Std. Touring. | 1515 | 4 | 3160 | aeghmnr | |
| Sedan Lim. | 3850 | 4 | | | 5p. Sp. Phaeton. | 775 | 4 | 2425 | | | | | | 5p. Sp. Touring. | 1585 | 4 | 3185 | aeghmnr | |
| PEERLESS | | | | | 2p. Coupe. | 745 | 2 | 2435 | ahn | | | | | 3-5p. Coupe. | 1585 | 2 | 3230 | aeghmnr | |
| "6-60" | | | | | 5p. 2d. Sedan. | 745 | 2 | 2520 | ahn | | | | | 5p. Coupe. | 1585 | 2 | 3270 | aeghmnr | |
| 2-4p. Roadster. | \$1195 | 2 | 2635 | aeghmnr | 4p. Sport Cab. | 795 | 2 | 2455 | ahn | | | | | 5p. Royal Sedan. | 1585 | 4 | 3310 | aeghmnr | |
| 5p. Phaeton. | 1195 | 4 | 2635 | aeghmnr | 5p. Sp. Sedan. | 825 | 4 | 2595 | ahn | | | | | 5p. Spec. Sedan. | 1585 | 4 | 3300 | aeghmnr | |
| 2p. Coupe. | 1295 | 2 | 2775 | aeghmnr | 5p. Sp. Landau. | 875 | 4 | 2640 | aehn | | | | | "8-90" | | | | | |
| 5p. Brougham. | 1195 | 4 | 2850 | aeghmnr | REO | | | | | | | | | 5p. Std. Touring. | 2025 | 4 | | aeghmnr | |
| 5p. Sedan. | 1195 | 2 | 2780 | aeghmnr | "Flying Cloud" | | | | | | | | | 5p. Sp. Touring. | 2095 | 4 | | aeghmnr | |
| 5p. Sedan. | 1295 | 4 | 2905 | aeghmnr | 2-4p. Roadster. | \$1685 | | 3350 | aeghmnr | | | | | 3-5p. Coupe. | 2095 | 2 | | aeghmnr | |
| "6-91" | | | | | 5p. Brougham. | 1645 | 2 | 3535 | aeghmnr | | | | | 5p. Coupe. | 2095 | 2 | | aeghmnr | |
| 2-4p. Coupe. | 1895 | 3 | 3225 | aeghmnr | 4p. Victoria. | 1795 | 2 | 3550 | aeghmnr | | | | | 5p. Royal Sedan. | 2095 | 4 | | aeghmnr | |
| 5p. Sedan. | 1895 | 4 | 3335 | aeghmnr | 5p. Sedan. | 1845 | 4 | 3645 | aeghmnr | | | | | 5p. Spec. Sedan. | 2095 | 4 | | aeghmnr | |
| 4p. Victoria. | 1895 | 3 | 3240 | aeghmnr | 5p. DeL. Sedan. | 1995 | 4 | 3645 | aeghmnr | | | | | 5p. Sp. Sedan. | 2095 | 4 | | aeghmnr | |
| 7p. Sedan. | 1995 | 4 | 3420 | aeghmnr | "Wolverine" | | | | | | | | | WILLIS-KNIGHT | | | | | |
| "6-81" | | | | | 4p. Cabriolet. | 1195 | 2 | 2850 | aeghmnr | | | | | "Std. 6" | | | | | |
| 5p. Phaeton. | 1540 | 4 | | 5p. Brougham. | 1195 | 2 | 2930 | aeghmnr | | | | | | 2-4p. Roadster. | \$995 | 2 | 2631 | aghmnr | |
| 7p. Touring. | 1595 | 4 | | 5p. Sedan. | 1295 | 4 | 3090 | aeghmnr | | | | | | 5p. Touring. | 995 | 4 | 2710 | aghmnr | |
| 2-4p. Coupe. | 1595 | 3 | 3140 | aeghmnr | ROAMER | | | | | | | | | 2-4p. Coupe. | 1045 | 2 | 2707 | aghmnr | |
| 4p. Victoria. | 1595 | 3 | 3155 | aeghmnr | "8-78" | | | | | | | | | 5p. Coach. | 995 | 2 | 2816 | aghmnr | |
| 5p. Sedan. | 1595 | 4 | 3270 | aeghmnr | 2p. Roadster. | \$1595 | 2 | 3450 | | | | | | 5p. Sedan. | 1095 | 4 | 2858 | aghmnr | |
| "6-89" | | | | | 2p. Coupe. | 1750 | 2 | 3225 | | | | | | "Great 6" | | | | | |
| 2p. Coupe. | 1895 | 3 | 3225 | aeghmnr | 5p. Sedan. | 1795 | 2 | 3380 | | | | | | 2-4p. Roadster. | 1850 | 2 | 3486 | aghmnr | |
| 5p. Sedan. | 1895 | 4 | 3335 | aeghmnr | "8-80" | | | | | | | | | 5p. Touring. | 1850 | 4 | 3675 | aghmnr | |
| 4p. Victoria. | 1895 | 3 | 3240 | aeghmnr | 2p. Roadster. | 1895 | 2 | 3310 | ag | | | | | 2-4p. Cab Coupe | 1995 | 2 | 3726 | aghmnr | |
| "6-93" | | | | | 2p. Coupe. | 1985 | 2 | 3410 | ag | | | | | 4p. Foursome Sed. | 2195 | 4 | 4128 | aghmnr | |
| 2p. Coupe. | 1895 | 3 | 3225 | aeghmnr | 5p. Brougham. | 1985 | 2 | 3440 | ag | | | | | 5p. Sedan. | 1995 | 4 | 4003 | aghmnr | |
| 5p. Sedan. | 1895 | 4 | 3335 | aeghmnr | 5p. Sedan. | 1985 | 4 | 3570 | ag | | | | | 135" W.B. | | | | | |
| "6-95" | | | | | "8-88" | | | | | | | | | 7p. Touring. | 2285 | 4 | 3943 | aghmnr | |
| 2p. Coupe. | 1895 | 3 | 3225 | aeghmnr | 5p. Tourer. | \$2495 | 4 | 3650 | ag | | | | | 5p. Coupe. | 2295 | 2 | 3939 | aghmnr | |
| 5p. Sedan. | 1895 | 4 | 3335 | aeghmnr | 2-4p. Roadster. | 2750 | 2 | 3540 | | | | | | 7p. Sedan. | 2595 | 4 | 4112 | aghmnr | |
| 4p. Victoria. | 1895 | 3 | 3240 | aeghmnr | 2p. Speedster. | 2985 | 2 | 2875 | | | | | | 7p. Limousine. | 2695 | 4 | 4146 | aghmnr | |
| 7p. Sedan. | 1895 | 4 | 3335 | aeghmnr | 5p. Sedan. | 2985 | 4 | 3880 | og | | | | | "Spec. 6" | | | | | |
| 7p. Limousine. | 2645 | 4 | 4200 | aeghmnr | 7p. Sedan. | 3285 | 4 | 3980 | og | | | | | 2-4p. Roadster. | 1350 | 2 | 2910 | aghmnr | |
| STUDEBAKER | | | | | "Dictator" | | | | | | | | | 5p. Touring. | 1295 | 4 | 2951 | aghmnr | |
| "Dictator" | | | | | 5p. Touring. | \$1265 | 4 | | aghmnr | | | | | 2p. Coupe. | 1295 | 2 | 2767 | aghmnr | |
| 5p. Touring. | 1325 | 4 | | aghmnr | 7p. Touring. | 1325 | 4 | | aghmnr | | | | | 5p. Coach. | 1295 | 2 | 3007 | aghmnr | |
| 5p. Club Sedan. | 1185 | 2 | | aghmnr | 5p. Club Sedan. | 1185 | 2 | | aghmnr | | | | | 2p. Cab Coupe | 2350 | 2 | 4119 | aghmnr | |
| 5p. Sedan. | 1265 | 4 | 3280 | aghmnr | 5p. Sedan. | 1265 | 4 | | aghmnr | | | | | 5p. Sedan. | 1495 | 4 | 3187 | aghmnr | |
| 2p. Bus. Coupe. | 1265 | 2 | | aghmnr | 2p. Bus. Coupe. | 1265 | 2 | | aghmnr | | | | | 133 1/2" W.B. | | | | | |
| 4p. Victoria. | 1345 | 2 | | aghmnr | 4p. Victoria. | 1345 | 2 | | aghmnr | | | | | 2-4p. Roadster. | 2245 | 2 | 3710 | aeghmnr | |
| 4p. Royal Cab. | 1395 | 2 | | Beghlmnr | 4p. Royal Cab. | 1395 | 2 | | Beghlmnr | | | | | 5p. Sedan. | 2345 | 4 | 3875 | aeghmnr | |
| 5p. Royal Sedan. | 1395 | 4 | 3415 | Beghlmnr | 5p. Royal Sedan. | 1395 | 4 | 3415 | Beghlmnr | | | | | 7p. Sedan. | 2545 | 4 | 3975 | aeghmnr | |
| "Commander" | | | | | "Commander" | | | | | | | | | 7p. Limousine. | 2695 | 4 | 4146 | aghmnr | |
| 4p. Sedan. | 1495 | 4 | 3665 | aghmnr | 4p. Sedan. | 1 | | | | | | | | | | | | | |

KEY TO SYMBOLS

*-Italic figures denote shipping weight.

A—Wood wheels with spare.
a—Wood wheels.
B—Wire wheels with spare.
b—Wire wheels.
C—Optional wheels with spare.

- c—Type of wheels optional.
- D—Disk wheels with spare.
- d—Disk wheels.
- e—Front and rear bumpers.
- f—Front bumper.
- g—Shock absorbers or snubbers.
- h—Automatic windshield wiper.

- i—Trunk and trunk rack.
- j—Trunk rack, no trunk.
- k—Spare tire.
- l—Spare tire lock.
- m—Engine heat indicator.
- n—Dash gasoline gage.

c—Car heater.
 p—Cigar lighter.
 r—Rear traffic signal.
 s—Spotlight.
 t—Vanity and smoking set.
 u—Smoking set.

v—Vanity set.
w—Windshield wings.
x—Clock.
‡—Overall length.
§—Price on application.

Mechanical Specifications of Current Passenger Car Models

This list comprises current cars distributed on a national basis only. Data for previous models back to 1910 will be found in the Chilton Catalog and Directory

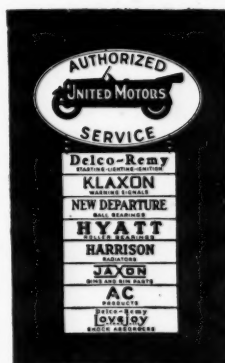
| MAKE AND MODEL | Wheel Base (Inches) | Tire Size | ENGINE | | | | | ELECTRICAL SYSTEM | | | | REAR AXLE | | BRAKES | | Chassis Lubrication— | ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS | | | | | | | | | | | | | | | |
|----------------|---------------------|-----------|----------------|-----------------|----------------|---------------------|-------------------|---|-------------------|----------------|-----------------|----------------|--------------------------|---------------------|------------------|----------------------|---|------------|--------------|----------------------|----------------------------|----------------------|---------------|--------------------------|---------------|------------|------------------------|-----------|--------------|--------------------|-----------------------------|----------------------|
| | | | Make and Model | Number of Cyls. | Rated H.P. | Piston Displacement | Valve Arrangement | Maximum Brake Horsepower at Specified Speed | Compression Ratio | Camshaft Drive | Piston Material | No. Main Bear. | Crankshaft Vib'n Dampers | Oil Cleaning System | Radiator Shutter | | | Carburetor | Air Cleaner? | Ignition System Make | Generator and Starter Make | Clutch—Type and Make | Gear Set—Make | Universals—Type and Make | Type and Make | Gear Ratio | Foot—Type and Location | Hand—Type | 4-Wheel Type | Steering Gear—Make | Rear Spring—Type and Length | |
| Auburn..... | 76 | 28x5.25 | Lyc. | WS | 8-27 1/2x3 1/2 | 10.8 | 185 | L | 60-3400/5.05 | Ch. | Ala. | Ala. | 4 | Y | PG | Y | Sch. | N | N | D-R | D-R | P Long. | War. | U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | A-Bos—American-Booth |
| Auburn..... | 88 | 30x6 | Lyc. | GS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 88-3200/5.15 | Ch. | Ala. | Ala. | 4 | Y | PG | Y | Sch. | N | N | D-R | D-R | P Long. | War. | U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | A-K—Atwater Kent |
| Auburn..... | 115 | 30x6 | Lyc. | AMD | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 115-3200/5.15 | Ch. | Ala. | Ala. | 4 | Y | PG | Y | Sch. | N | N | D-R | D-R | P Long. | War. | U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | A-L—Auto-Life |
| Buick..... | 121 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 71-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
| Buick..... | 121 1/2 | 30x6 | Own. | WS | 8-27 1/2x3 1/2 | 26.4 | 247 | L | 91-2800/4.3 | He. | Ch. | Ala. | 4 | Y | PG | Y | Mar. | N | N | D-R | D-R | D Own. | Own. | m-U-P. | Col. | 4.9 | L-F | H | Ros. | 58 1/2 | Bj. | Ada—Adams |
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Profit and Goodwill from the sale of *Specialized Service*

JUST as United Motors realizes that the car dealer is justly entitled to a margin of profit on the service work that he "farms out", so does the car dealer realize that certain units on the car can better be serviced by specialized service stations which several car dealers can support in the average size community.

The car dealer further realizes that such a procedure saves the cost of at least one man, cuts down his invested capital and reduces his fixed overhead. And, when the specialized service station prices its work so as to allow the car dealer a reasonable margin of profit, the idealness of the entire arrangement overcomes the last shadow of doubt in the mind of the car dealer.

United Motors Service, through its



Branches and its Authorized Distributors, is the "specialized service station" which offers the car dealer this practical solution of his specialized service problem. For twelve years United Motors has stocked parts for the car dealer; provided the car dealer with

authorized, guaranteed service on the products here featured; allowed the car dealer a liberal discount on both parts and labor, that the car dealer, too, might profit.

Car dealers who are not familiar with the advantages of dealing with United Motors Service are urged to talk the matter over with our nearest Branch or Authorized Distributor. A copy of our new Service Directory (listing more than 2500 Branches and Distributors) will be gladly mailed to any car dealer upon request.

UNITED MOTORS SERVICE

General Offices

INCORPORATED

Detroit, Michigan

Locations of Control Branches

ATLANTA
BOSTON
BUFFALO
CHICAGO

CINCINNATI
CLEVELAND
DALLAS
DENVER

DETROIT
INDIANAPOLIS
KANSAS CITY
LOS ANGELES

MILWAUKEE
MINNEAPOLIS
NEW ORLEANS
NEW YORK

OMAHA
PHILADELPHIA
PITTSBURGH
ST. LOUIS

SAN FRANCISCO
SEATTLE
TORONTO,
CANADA

for **13**

consecutive months **Studebaker sales have shown big increases!**

EVERY month, since September, 1927, Studebaker Sales have exceeded those of the corresponding month of the year before—and by a substantial margin!

The President Eight at \$1685, has outsold other eight-cylinder cars—just as it out-performed all other cars by traveling 30,000 miles in 26,326 consecutive minutes! And this great car is less than a year old.

Erskine Six sales to July, 1928 exceeded the total sold in 1927. Eleven official

records prove it the finest, fastest car under \$1000. It's your entering wedge—starts at \$835 f. o. b. factory.

The Commander, with its record of 25,000 miles in less than 23,000 minutes, and The Dictator, with its record of 5000 miles in 4751 minutes, round out a line that overlooks no profit possibilities.

A car for everybody—a price to fit the income of the big majority of prospects! And too—delivery cars, funeral cars, ambulances, busses and chassis for police and fire departments—all yours to sell, with one small overhead!

Turn and read how easily you can take on this money-making franchise with very little investment!

Y—Yes
X—Slave valve

Warder pump
R—Recorder

Wristplus

Q—Special type (rear springs)
O—Oil cups

I—F—Internal four wheels

E—T—External transmission
F—Fabric

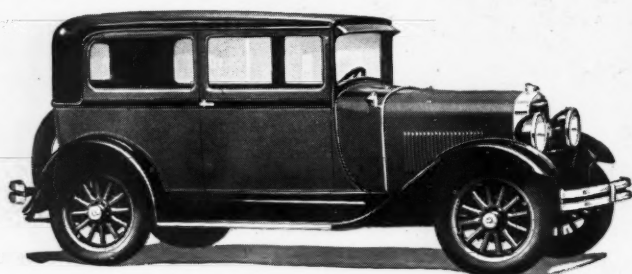
B—F—Internal front and external rear

STUDEBAKER

The Great Independent

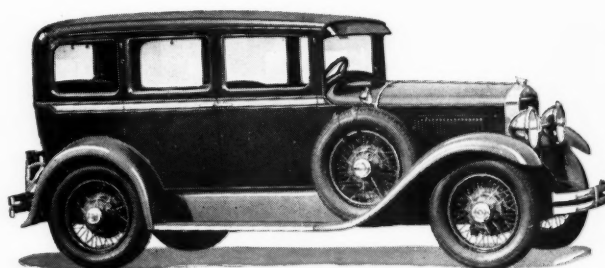
offers the biggest money-making
opportunity in the industry

Four great cars in 4 price classes—proved value and
performance—supreme style—\$835 to \$2485 f. o. b. factory



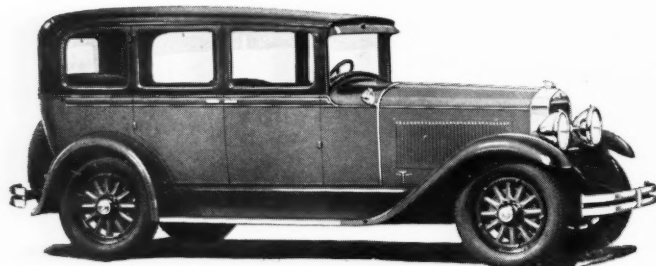
Studebaker's Erskine Six

In looks and in proved performance the finest, fastest car under \$1000. Its record of 1000 miles in 984 minutes has never been equaled by any other stock car under \$1000. Styled and built to meet to-day's demand. \$835 to \$1045.



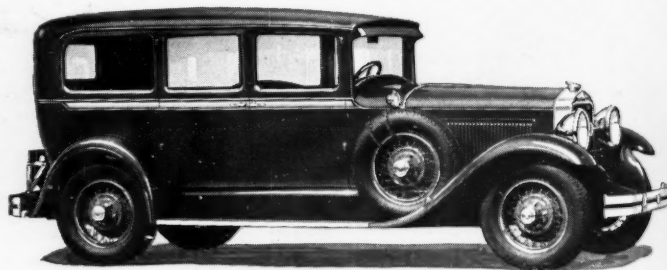
The Studebaker Dictator

Proved champion of its class—5000 miles in 4751 minutes—a record unequaled by any stock car under \$1400! Ball bearing spring shackles, hydraulic shock absorbers. \$1185 to \$1395.



The Studebaker Commander

The car that traveled 25,000 miles in 22,968 minutes. A car in demand everywhere, because everywhere The Commander's brilliant performance is known and respected. \$1495 to \$1665.



The Studebaker President Eight

The car that traveled 30,000 miles in 26,326 minutes, and by doing so established 5 world's records for endurance and speed. Six months after its introduction it outsold every other eight in the world. Sensational in performance, in comfort and in price. \$1685 to \$2485.

THE STUDEBAKER CORPORATION OF AMERICA
Dept. 51, SOUTH BEND, INDIANA

Please send me full information on the Studebaker-Erskine franchise.

Name _____

Street Address _____

City and State _____

My present business (if selling cars now, state make) _____

New Contract for Towns and Villages

For small communities Studebaker offers an unusually profitable contract. Hardly any capital is necessary. No shop need be operated. No used cars need be handled. No commitments need be made to purchase any particular number of cars. You may confine your selling effort to the opening wedge of the line—The Erskine Six at \$835 f.o.b. factory. Maintaining an Erskine demonstrator entitles you to sell all other Studebaker models—not only Commander, Dictator and President Straight Eight, but a profitable and popular line of commercial cars as well. Mail the coupon today. Department 51, The Studebaker Corporation of America, South Bend, Ind.

This is the Peak Month for Pines

AUTOMATIC Winterfront Sales



WHILE the business done by car and accessory dealers in Pines Automatic Winterfronts is continuous from September to April—November is by far the peak month.

More Winterfronts are sold because more car owners come face to face with the urgent need for *automatic motor protection*. Thus—in November—Pines Winterfront dealers make their biggest harvest.

Winterfront sales throughout this year have been greatly increased because manufacturers of many leading cars have adopted *automatic motor protection* as standard.

This fortunate condition will reflect itself

in this, the biggest Winterfront month. We predict this November will be the biggest in the history of this company.

If you have not already stocked Pines Automatic Winterfront, do so now, and get your share of this big month's business. Your distributor will help you. Communicate with him now.

Remember—Pines Automatic Winterfront is the shutter you *must* sell to meet the demand created by industry-wide endorsement of *automatic motor protection*. It is the only *automatic* radiator shutter on the market. Thermostats are guaranteed.

PINES
WINTERFRONT — *It's Automatic*

**PINES WINTERFRONT COMPANY, 410 N. Sacramento Blvd
CHICAGO, ILLINOIS**

Wholesale distributing connections everywhere. Write us for name of your nearest distributor.

A new car is born

A remarkable car, a non-competitive car, selling for approximately \$2500, will be presented to the automobile trade at the time of the New York Show. Destined for a great future! New in every respect and from every angle. Designed individually from front bumper to tail bumper. Powered with either a six or eight cylinder motor (optional with customer).

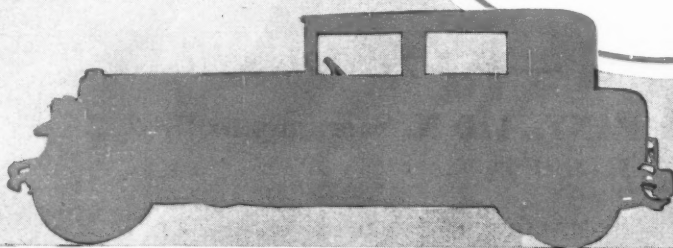
The engineer's opinion

"The car as a whole, I confidently expect, will be recognized by the automotive engineering profession as a great step forward in the perfection of motor car design—a combination of simplicity of operation, maximum efficiency and greater safety.

"While in some ways, the car seems to be a radical departure from earlier practice, it utilizes only tried and sound principles. There is nothing in the design which is freakish or experimental. The combination of accepted principles has resulted in a truly remarkable automobile."

Tried and tested

There is nothing untried or experimental in this new car. Years of time and hundreds of thousands of dollars have been expended in thoroughly testing and proving the efficiency of every unit. And these basic mechanical features cannot be copied overnight by competing companies. Dealers who sell the line will be "away out in front."



Distinction

"Because of the close contact we have had in the development of the car as a whole, this is the first time in an experience extending from the inception of the industry that we have had full say in the development of a chassis best adapted to body design.

"The result is most gratifying—a car of unusually distinctive appearance, yet free from any suggestion of freakishness. Lines and contour are exceedingly smart and are emphatically suggestive of smooth, straight-forward speed."

—A statement by the Body Designer

Dealers— write now

The enlarged production plans of the manufacturer open the way for dealers to associate themselves with an already strong group of dealers. The future offers unlimited possibilities to men who are now in the business or those who desire to become dealers. There may be an opening in your territory. Address your inquiries—without delay—to

Manufacturer New Car, care

MOTOR AGE

Chestnut and 56th Streets, Philadelphia

Low center of gravity

By use of the worm drive rear axle, the center of gravity of the new car is lower by several inches than all other cars, except one. The low weight contributes largely to safety because overturning in case of accident is practically an impossibility—side sway is notably absent—and greater comfort is the ultimate gain. The low center of gravity vouchsafes for roadability that is most pleasing.

Advanced engineering

Dealers will be interested in the profit-making abilities of this new car. Either a six or eight cylinder motor, optional with the customer, not a single unit untried or experimental—a low center of gravity, made possible by the worm-drive rear axle with its attending safety features—distinctive and built-into-the-chassis bodies. A non-competitive car, priced to sell in volume, built by an old established manufacturer whose dealer policies are fair and equitable.

Technical Control



EACH manufacturing step in the development and production of Bohn Ring True Bearings is a scientific process.

To insure uniformity of products, "heats" of convenient size are alloyed. All heats are held within strict specifications and are constantly checked for chemical content by our own laboratories.

This is but one of the numerous scientific steps which enter into the technical control practiced by Bohn bearing experts.

The Bohn Ring True patented process Interchangeable Bearing is machined to precision limits. Maximum variations in essential dimensions does not exceed .00025.

Also manufacturers of Nelson Bohnalite Pistons and Bohnalite Castings.



BOHN ALUMINUM & BRASS CORPORATION
DETROIT MICHIGAN

Your engineering department knows the mechanical advantages of Nelson Bohnalite Pistons.

Your sales department knows the merchandising advantages of

NELSON
BOHNALITE
PISTONS

Nelson Bohnalite Pistons mean snappier getaway—greater speed—longer life and smoother operation because reciprocating parts can be lightened—bearing loads lessened—compression increased—expansion and contraction perfectly controlled.

BOHN ALUMINUM & BRASS CORPORATION
Detroit, Michigan

Also makers of the famous Bohn Ring True Bearings



The short visor on the modern car makes every new car buyer a prospect for *Visorite*. Fits any visor, can be attached in a few seconds with patent clamps. *No holes to drill*. Attractive—well made—casts a soft green light which dispels all glare.

Lists at \$2.95

Ash your jobber's salesman. If he cannot supply you, write direct giving his name.

SAYLOR MFG. CO., DENVER, COLO.
2205 Champa Street

NEW BALLOON TIRE TESTER TANK

(Patented Aug. 26, 1903)



Needed in every service station and repair shop. Thousands now in daily use. Saves time! Makes profits! Adjustable rod supports tube. Tank is made of sheet steel and galvanized after formation.

Write for prices.

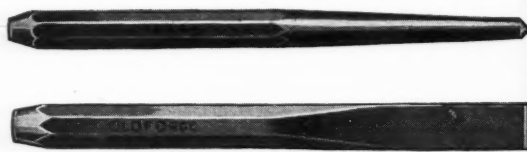
Size 31 in. long 8 1/2 in. wide 8 1/2 in. deep
DOVER STAMPING & MFG. CO., Cambridge A, Mass.



DISTRIBUTORS!!

Tools—capable of standing up under any demonstration—sure of netting you a handsome profit—making you new friends as you sell them—This is what you get in the "Old Forge" line of wrenches, punches and chisels. Try them and convince yourself.

QUALITY TOOL CORPORATION
NEW WILMINGTON PENNSYLVANIA



The Hand Operated Brake Tester!

License Pat. No. 1264770
Other Pats. Pending.



Pedal Depressor
No. 6 Locking Type

The patented Linendoll Auto Brake Tester gives all information necessary for equalizing brakes on any car or light truck! \$37.50 complete. Write us!

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Real Estate Trust Bldg.
Philadelphia, Pa.

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*Do not fail to read inside
back cover of this issue*

GRAIGRENE

[PRONOUNCED GREY-GREEN]

the fluid lubricant for transmission and differential
VISCOSITY OIL COMPANY
Central Manufacturing District, Chicago

FLEXO
Trade Mark Reg.
COMBINATION
PISTON RINGS

Guaranteed

Two combination rings of special design with Expanders of finest Swedish steel. Guaranteed to seal cylinder and centralize pistons, eliminating oil pumping, piston slap and compression loss when properly installed. Write for details.

The Wel-Ever Piston
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accounts for every labor minute



Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

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Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

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Absolutely automatic — except for winding. Every machine guaranteed.

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in the automotive indus-
try are the readers of
Motor Age.

It keeps them up on their
toes—alert, resourceful and
in position to recognize suc-
cess when it comes their way.

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1,000,000 a year going into service
CARTER CARBURETOR CORPORATION, ST. LOUIS

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Radiator Caps

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THE KINGSLEY-MILLER COMPANY - CHICAGO



Neil's

Rewound Armatures

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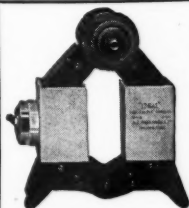
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THE **DURANT** LINE
IS A BRILLIANT SUCCESS

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Factories: Elizabeth, N. J.—Lansing, Mich.—Oakland, Cal.—Toronto, Canada



IDEAL ADJUSTABLE PORTABLE GROWLER

A hinged device to test all armatures from 3/4" to 10" diam. Ideal Adjustable Growlers make the proper span eliminating core or slot shorts. Guaranteed satisfactory or money refunded. Get prices and sales offer.

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EQUIPMENT
MAKES SERVICE PAY

WRITE FOR CATALOG

The PRICE-HOLLISTER CO. Rockford, Ill.



Model A-AA
for
Passenger Cars

A waving red light is the universal danger signal. Here is a positive warning stop light, with positive profits. Write today for complete information.

The
ILER ELECTRICAL MFG. CO.

5103 Lakeside Avenue, Cleveland, Ohio

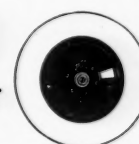
RIGHT WAY BRAKE TESTER

Licensed under Patent No. 1264770

RIGHT WAY BRAKE TESTER COMPANY
WATERTOWN, WISCONSIN



BUDD
WHEEL COMPANY
Detroit



Valve Face
Grinding Machine

No. 620 refaces valves of any angle, with stems of 1/4" to 1/2" diameter. Sioux Roller Chucking System assures amazing accuracy and speed. Net price complete, \$145.00.

Your Jobber Sells It.

ALBERTSON & CO.

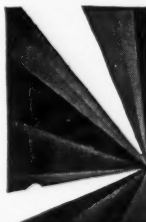
Sioux City, Ia., U. S. A.



PISTONS FITTED WITH PINS

Arrow Head standards are the same for both equipment and replacement. The motor's reputation in the field must be carefully maintained.

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With the World to choose from
they chose

HOUDAILLE
SHOCK ABSORBERS
for the ride

HOUDE ENGINEERING CORP., Buffalo, N.Y.



LANDIS Shock Diffusers

Now Ready for

FRANKLIN, PACKARD, MARMON
CHRYSLER IMP. 80, HUPMOBILE CEN. 8

LANDIS ENG. & MFG. CO.
AUTOMOTIVE DIV. WAYNESBORO, PENNA.

NEXT WEEK

—is the time to read next week's issue of MOTOR AGE, as you are reading this week's issue this week

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R & R SUPER POWER CYLINDER HEADS

For Chevrolets and Racing Equipment

R & R MANUFACTURING CO.

CABLE ADDRESS RCO

ANDERSON, INDIANA

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SHOP EQUIPMENT for

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Test Benches • Rectifiers • Constant Potential Battery Chargers • Lathes
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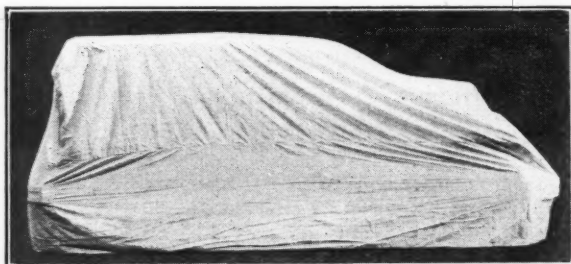
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Chicago, Illinois

Protect New Car Finish!

with

KEEP KLEAN Car Covers



These covers of strong unbleached muslin afford complete protection against dust and moisture, and are specially designed for Winter Storage purposes. Easily laundered, will outlast many ordinary coarse paper covers with no chance of scratching paint. Order a few NOW.

3 Standard Sizes in stock, immediate shipment

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|---|-----------------------|-------------|
| List Price subject liberal dealer discount | 110"-120" wheelbase | \$11.75 ea. |
| | 120"-130" wheelbase | \$12.25 ea. |
| | 130" and over | \$13.00 ea. |

N. B.—Interesting prices will be furnished for car covers of any special fabric desired.

P. W. Barnum & H. T. Stevenson

Keep Klean Auto Products Company, Inc.
416-422 East 176th St., New York City

is a 15c gasket worth \$200?

ABSOLUTELY NO—so why waste \$2 worth of time running around hunting an obsolete size gasket when YOU CAN CUT ONE YOURSELF from the sheet in your own shop in a few minutes? Garages now are saving time and money for themselves and their customers. USE MORE SHEET PACKING—Give service—Get the job out today and collect the cash.

TENAX Unexcelled for Oil and
"Original Blue Sheet" Heat Gaskets

Thousands of repairmen will use only TENAX compressed asbestos sheet packing—FOR USE WHERE THERE IS HEAT—no matter how intense. Makes a quality job that stands up.

For Intake and Oil
Conditions

TANPAC
"Sheet Packing"

For use where water, oil, gasoline and grease are encountered and where there is NO HEAT. Withstands heavy pressure and temperature up to 300°. Light in weight—and "THE TOUGHEST OF THE TOUGH."

Advance Products have more than 25 uses on every car and for more than 20 years have been the standard quality packings for automotive replacement. Order your stock today from your jobber, or write us direct giving us his name.

**Advance
Packing & Supply Co.**
808 W. Washington Blvd., Chicago, Ill.

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